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Classification of Solar Prominences for Sunspot Cycle No. 19 – 1956

BY

DONALD H. MENZEL AND F. SHIRLEY JONES

Harvard University Solar Department of Harvard College Observatory Cambridge 38, Massachusetts

> Contract No. AF19(604)-4962 Project No. 7649 Task No. 76490

SCIENTIFIC REPORT NO. 16

January, 1963

Prepared for

GEOPHYSICS RESEARCH DIRECTORATE AIR FORCE CAMBRIDGE RESEARCH LABORATORIES OFFICE OF AEROSPACE RESFARCH UNITED STATES AIR FORCE BEDFORD, MASSACHUSETTS

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CLASSIFICATION OF SOLAR PROMINENCES FOR SUNSPOT CYCLE 19--1956 by Donald H. Menzel and F. Shirley Jones

ABSTRACT

Behavior classifications and measures of position and size for the solar prominences on the surveys made at the Sacramento Peak Observatory, Sunspot, New Mexico, for the year 1956 are tabulated. In analysis of the distribution of the various classes of prominences with solar latitude is then carried out. A similar study for the year 1955 appeared in Scientific Report No. 13 under contract AF19(604)-4962.

The research reported in this paper has been sponsored by the Geophysics Research Directorate of the Air Force Cambridge Research Laboratories, Office of Aerospace Research, under contract AF19(604)-4962.

INTRODUCTION

The observations we used in this research consisted of the complete set of prominence surveys made at the High Altitude Observatory at Sunspot, New Mexico, during the year 1956, and the motion picture films of prominences made on 58 days during the same year at the same observatory.

In Table 1 we list the measures of position and area, the intensity estimates, and the classification according to the Menzel and Evans scheme (1953), modified by the addition of classes ASa (rain) and ANe (suspended clouds) of all the prominences in the surveys. We give classifications for the prominences in the motion picture studies in Table II.

Column 1 gives the date of the observations. Column 2 indicates the amount of spread, in terms of the position angles marked by the beginning and end of each prominence. A spread of 1° indicates the position only of each of the narrower prominences, some of which are less than 0.5° in width. Column 3 gives the latitude of the center of intensity.

Column 4 indicates the "importance" of the prominence by an assigned letter giving a rough measure of the total intensity, from D- for the most insignificant through A* for the most impressive prominences. Column 5 records the area of the prominence, expressed in standard prominence units.

Column 6 contains the class. Doubtful classifications are followed by a question mark. Non-spot
prominences so adjacent to spot prominences as to suggest
association with the spot are noted by asterisks. Column
7 gives additional comments.

Table II gives the classifications for the prominences in the motion picture studies. The columns show date, position angle of the center of the frame, classification, and additional comments.

TABLE I

1956 SACRAMENTO PEAK PROMINENCE SURVEYS

		Lat. of Center of	Impor-	Area		
Date	Spread	Intensity	tance	in p.u.	Class	Comments
1956						
Jan. 1	350-13 37-39 58-59 72-84 89-97 113-117 116-124 127-136 140-144 198-200 219-221 231-240 232-240 244-251 261-263 291-298 301-305 307-321	N87 N54 N33 S1 S27 S827 S60 S73 S35 S35 S35 S10 N30 N47		30 40 3500 70 75 50 20 29 18 10 20 20 20 20 20 20 20 20 20 20 20 20 20	BNs s ANM ASa ANd ANd ASf ANd* ANd ANM BNs BNs,s ASf ANc* ANd BNs ANd BNs	
Jan. 2	339-19 36-43 59-61 65-83 86-89 94-101 104-106 116-117 123-136 140-154 165-181 204-205 232-243 254-284 295-296 312-319 316-320	N87 N5428 N553551 S52551 S5359 S536 S536 S537 N47 N47	D-+	30 125 25 30 25 30 25 20 20 20 30 20 30 20 20 20 20 20 20 20 20 20 20 20 20 20	BNs 's ANm ANm ANd ? ANd ANm ANc ANd ANd BNs 's BNs ANd ANd ANd ANd ANd ANd	Hadgerow elevated by surge
Jan. 3 (cont.)	32-43 50-59 78-81 86-87 94-96 102-106 109-116 139-148	N53 N45 N15 N4 S4 S21 S52	C D	235 75 35 45 15 70 225	And And BNs s BNs PNs, And	·

Date	Spread	Lat. of Center of Intensity	Impor- tance	Area in p.u.	Class	Comments
1956						
Jan. 3 (cont.)	165-184 218-220 227-242 258-261 269-272 272-284 282-289 289-295 311-319	880 852 837 811 81 N5 N15 N21 N45	D= D= B D= D+ C+ D= D+ B	20 15 480 40 80 350 25 115 525	BNs s BNs ANd BNs s BSs? ANd* BSs s ANd ANd	Arching streamers Part ascending
Jan. 4	346-22 23-24 29-36 38-45 59-65 73-77 79-84 87-89 104-107 119-126 137-142 140-147 181-184 230-234 258-259 274-278 279-282 289-296 301-320 324-327	NAC N59 N50 N28 N10 N3 S15 S32 S32 S34 S39 S14 N10 N28 N138 N154	D	450 130 130 150 150 150 150 150 150 150 150 150 15	BNs s BNs s ANG ANG ANG ANG ANG BSs BNs s BNs ANG BNs ANG PSs ANG ANG ANG ANG ANG ANG ANG ANG ANG ANG	Loop-shaped surge
Jan. 5	334-352 354-355 1-24 29-34 35-38 35-46 48-49 55-78 80-88 99-102 103-104 113-117 134-141 161-203 211-223 224-249	N72 N83 N78 N59 N48 N41 N18 N18 N18 S10 S14 S25 S47 S537		2230 1050 1550 1550 165440 165440 165440 1654440 1654440	BNs s AND BNs s BNs s BSs AND BSs AND ASS AND BNS S AND BNS S BNS S BNS S BNS S	Streamers Arch

Date	Spread	Lat. of Center of Intensity	Impor-	Area in pou	Class C	omments
1956						
Jan. 5 (cont.)	237-240 248-251 259-260 260-262 278-284 289-290 299-300 312-327	S31 S20 S10 S9 N12 N19 N30 N48	D= D= D= D= D= D= C	40 10 20 15 30 10 5 225	BSs BNs,s ASf ASI ANd ANe BNs ANd	
Jan. 8	39-75 110-111 156-206 234-240 270-278 284-292 293-306 308-314 321-338	N28 S 22 S 86 S 32 N6 N19 N28 N111	A D = D = D = D = D = D = D = D = D = D	1950 10 30 125 170 160 90 60	And Bns s And And ASa BSs s Ancs	Arch
Jan. 10	34-63 71-79 91-92 115-135 191-192 212-214 221-224 224-227 249-251 250-270 284-295 303-307 322-324	N22 N38	A-D+D+D+D-DD-DD-DD-DD-DD-DD-DD-DD-DD-DD-D	1275 105 10 750 10 100 45 30 75 450 76 455	And And Bns And And And Ase Bss Bss And And And And	Poor seeing all day
Jan. 11	341-358 40-65 71-79 80-82 88-90 97-108 115-135 171-202 212-219 225-23 237-24 248-26 285-28 292-30 319-32 331-33	N37 N11 N6 S2 S S15 S S81 S S51 S S40 S S13 N20 N33 N54	D* B D * D* D* D* D* D* D* D* D* D*	3525 505 505 155 155 150 120 120 125 150 150 150 150 150 150 150 150 150 15	BNs s ANd ANd ANc BSs? ANd BNs s ANd BNs s ANd ANd ANd ANd ANd	Streamer
Jan. 1	147=60 56=57 59=614	N32 N29 N21 ₁	D - C - D - D -	20 175 25 45 30	BNs 4 s And# BSs Asa Anc#	

Date	Spread	Lat, of Center of Intensity	Impor⊶	Area in p.u.	Class	Comments
1956	•	•				
Jan. 12 (cont.)	85-95 96-106 110-134 170-192 213-220 232-233 237-243 239-241 243-246 255-258 269-286 288-290 302-304 314-323	S4 S14 S37 S85 S50 S33 S26 S26 S21 S10 N12 N23 N37	C	195 25 1050 15 115 10 65 20 30 275 50 10	ANd BNs s ANd RNs s ANd ANd ANd ANd ANd BSs BNs ANd	
Jan. 13	5-6 46-50 53-56 58-69	No.1 N37 N32 N23 P.A. 900	D- D- D C to 315°	10 10 60 175 missing	BNs BSs? AS1 BSs8s	Omitted in the Analysis
Jan., 17	31-54 85-88 94-98 208-211 221-225 251-253 258-264 278-293 314-319	N48 S1 S11 S55 S42 S13 S1 N19 N51	A D - D - D - D - D - C + D	1250 60 15 20 80 50 120 290	And And Bns ss? And Asa Bss And And	Poor seeing all day
Jan. 18	30-45 94-98 118-119 238-248 268-278 293-299 313-319	N48 S12 S34 S21 N7 N32 N52	B D → D ∼ D D D ↔ D	700 75 10 110 60 100 55	ANd ASa BNs ? ANc ANd ANd?	Poor seeing all day Streamer
Jan。19	6-7 38-44 63-64 77-79 86-95 116-119 191-192 209-213 229-245 237-238 253-256 269-277 287-297 310-314 318-337	N77 N43 N20 N6 S5 S73 S53 S26 S26 S10 N9 N28 N48	D = D = D D D D D D D D D D D D D D D D	70 210	ANm? ANd BNs ? ANd ANd BNs ANd ANd ANd BSs ANc	or BNs? Horizontal streamers

	Date	Spread	Lat. of Center of Intensity	Impor- tance	Area in p.u.	Class	7 Comments
	1956						
: -	Jan. 20	39-49 52-53 53-61 69-77 113-115 151-152 207-212 218-219 224-243 249-251 284-298 306-311	N38 N30 N27 N11 S31 S69 S53 S44 S28 S13 N27 N45	D	70 25 100 65 30 10 165 20 215 750 135	ANd ANd ANd ANd BNs ANm BSs? ANd ANc ANc	Fine example
•	Jan. 25	17-24 46-53 76-78 83-91 127-133 177-181 216-221 239-240 242-244 247-251 258-265 272-287 290-311	N60 N32 N4 S8 S50 S80 S38 S22 S18 S12 N1 N20 N35	B	400 50 15 350 85 20 165 170 115 100 300	ANM ANd BNs ANd ANd BNs s ANd ANc+ ASf ANd+ ANd ANd; ANd	Poor seeing all day
	Jan. 26	13-24 36-40 41-60 62-67 65-81 74-77 94-97 104-114 127-131 209-211 215-217 219-227 233-235 242-256 268-290 279-282 293-299 318-337	N63 N16 N33 N16 N5 N6 S148 S515 S10 N18 N18 N18 N18 N18 N18 N18 N18 N18 N18	C+	535 285 100 200 200 200 200 200 200 200 200 200	And BSS And* BSS ASE BSS And And And Ase And ASE BSS BSS? BNS*S	or ANm?
	Jan. 29	5-11 23-30 52-61 60-65 61-80 80-83 88-90 93-99	N71 N54 N22 N18 N7 S3 S10 S17	D C C+ D D D D C C+	45 230 300 55 160 75 35 65 260	And And And Asa Bss's Anc Anc Bss And	Poor seeing n n n n n n

		Lat. of Center of	Impor-	Area		
Date	Spread]ntensity ⁰	tance	in p _n u _n	Class	Comments
1956						
Jan. 29 (cont.)	118-129 128-135 207-215 217-219 231-242 258-260 270-282 295-297 300-302 303-304	251 251 241 241 248 241 248 244 244	C D D C D D D D D D D D D D D D D D D D	160 100 285 35 110 70 230 25 25	And Anc* BSs? ASf Anc. And ASa BSs Anc*	Poor seeing n u or ANm? Poor seeing n n n n n n n n
Feb. 5	25-28 36-45 53-59 62-65 75-81 96-102 150-151 238-247 260-268 270-276 276-284 287-293 303-319	N50 N36 N21 N13 S2 S37 S74 N8 N18 N21 N35 N56	00 00 00 00 00 00 00 00 00 00 00 00 00	25 180 70 20 190 45 10 235 165 135 40 1150	Anc And BSs And AS1? BNs 's BNs And And Asa BSs, s And And	Poor seeing n n n n Part ascended
⊋eb。 6	19-35 39-55 61-65 74-76 78-87 95-96 106-111 121-157 233-250 261-282 290-291 300-319 307-309	N49 N29 N13 N1 S5 S20 S32 S61 S16 N13 N35 N53	D# CD D D D CD D CD D D D D D D D D D D	170 225 90 50 65 15 30 25 375 425 10 775	And And BSs And? And BNs s And And BNs And BNs	or BSs?
Feb. 10	15-21 31-40 49-54 53-55 54-60 89-108 116-125 180-190 188-192 206-229 239-247 266-268	N56 N39 N22 N20 N17 S30 S47 S69 S64 S10 N13	D D* D* D* C D C	50 215 80 30 100 115 220 15 90 380 190 65	ANd ANd ASa ANd	

	Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
	1956						
	Feb. 11	7-8 13-21 29-41 45-59 47-51 60-68 89-96 95-96 112-121 139-143 220-222 217-218 223-225 229-231 243-246 265-269 299-301 306-316	N66 N59 N40 N23 N23 N20 S21 S43 S66 S37 S30 S19 N14 N14 N14 N14 N14	D- D	10 85 235 125 85 60 105 105 15 15 15 160 160 160 160 160	Bns And And+ Asa Bss,s And Asa Bss And Bns,s Anm Bns Anc Bns Anc Bns And And And	Poor seeing all day
	Feb., 12	17-18 28-39 40-54 53-58 64-65 86-96 110-121 198-203 210-217 220-236 227-233 247-250 258-267 270-289 298-305 308-315	N56 N39 N38 N10 S18 S44 S23 S6 S6 S6 N6 S6 N6 N59	D. C. D. C. D. C. D. C. C. D. C.	10 235 145 15 10 115 200 30 120 325 125 50 190 95 20 110	BNs ANd# ASa BSs 8 s BSs ASa ANd	Streamers Streamers Streamer
•	Feba 13	347-9 34-49 51-55 56-64 65-69 75-76 85-92 92-96 103-118 145-159 186-191 197-201 215-226 223-230 237-239 242-249	N75 N30 N20 N11 N6 S2 S15 S21 S40 S77 S65 S54 S31 S29 S15	Du D	15 225 75 130 30 55 30 325 30 325 20 40 30 50 20	BNs 9 9 ANd 49 AND BNS	Streamer Part ascended

Date	Spread	Lat. of Center of I Intensity ot	mpor-	Area	Class	Comments
	apr our	ziiooiib1e3	٠٠	zes powe	01250	
1956						
Feb. 13 (cont.)	250-254 258-259 268-272 285-288 293-295 306-334 310-313	S1 N6 N17 N33 N41 N66 N58	D D D D D D D D D D D D D D D D D D D	30 40 15 20 15 45 100	AS A ANA BNs s ANC ? BNs s ANM	
Peb. 14	54-58 65-67 96-104 113-132 138-142	N17 N7 S28 S51 S67 P.A. 1800	D D B C D to 31	115 40 450 190 45 50 missi	ANm ANa? ANd ANd ANd	Poor seeing all day Omitted in the Analysis
Feb. 17	17-22 28-37 57-73 94-96 197-200 227-232 242-254 280-288 302-305	N53 N41 N3 S23 S54 S22 S4 N32 N52	C- C B D- D- D+ D+ C- D-	125 310 725 30 60 95 150 170	ANd ANd ANM ANM ANM ANG ANd ANd ANM	Poor seeing all day
Peb. 19	342-343 15-22 26-40 41-51 51-59 65-69 77-92 100-101 102-103 105-127 197-204 215-219 221-231 242-243 249-268 297-304	N83 N53 N41 N25 N13 N14 S17 S32 S32 S524 S8 N41 N51	DCBDCDDDCDCCCCC	5 250 470 5 200 85 200 15 75 7 280 15 210 180	BNs ANC ANd BSs's ASf ANd* ANd BSs ASa ANd* ANd BSs ANd BSS ANd BSS ANd BNS ANd	Streamer
Feb. 21	37-44 68-75 213-229 289-292 291-302	N 30 N 10 S 31 N 140 N 145	D C B D	170 250 700 40 180	ANd ANd ANM ANM	Poor seeing all day Omitted in the Analysis
Feb, 22	14-15 29-42 55-67 72-74	N55 N30 N11 S3	D= B= C= D	65 650 3 5 0 40	ANe ANC ANd ANC	Poor seeing all day Streamers

Date	Spread	Lat. of Center of Intensity	Impor-	Area in pouc	Class	Comments
1956						
Feb. 22 (cont.)	84-101 112-119 216-219 221-238 246-262 266-277	524 545 533 514 N4 N23	D C ∞ D ∞ D D ∩ C	11.5 13.5 25 75 300 190	ANd? ANd ANm ANd ANe ANd	Foor seeing all day Arching streamer
Feb。23	14-16 28-42 54-55 68-72 91-101 113-117 153-154 166-167 207-209 213-216 225-229 240-265 265-277 270-282 290-310	N55 N33 N16 0 S24 S45 S81 S42 S36 S22 N22 N49	D B = D D D D D D D D D D D D D D D D D	65 625 10 65 95 140 10 5 10 90 1325 120 475	AND AND AND AND AND AND BNS BNS AND BSS? ANC AND ASS BSS,S AND	Arch or BSs? or ANm? Streamers
Mar _o 10	8-30 37-47 51-59 53-54 64-66 90-94 112-118	N46 N24 N12 N1 N1 N27 S47 P.A. 180	B D D- D- D- D D+	700 125 50 60 15 50 130	ANd ASB BSB ASB BSB ANd ANC ark to	Omitted in the Analysis
Mar. 11	7-38 34-43 41-51 49-63 54-59 75-86 87-93 105-117 135-143 176-177 196-205 215-221 217-225 231-240 247-251 259-262 271-273 275-284 291-294 301-311	N47 N30 N23 N10 N11 S12 S47 S46 S46 S27 S11 N26 N34 N47 N59	A. D. D. C. D. C. D. D. C. D. D. C. D. C. D. D. D. D. C. D. D. D. D. D. C. D. D. D. D. D. C. D.	1215 115 100 120 150 155 185 20 10 150 150 160	ANCA ASA ANCA ANCA BSS? BNS S ANCA ANCA ANCA ANCA ANCA ANCA ANCA ANC	Streamer Streamer

Data	beere?	Lat. of Center of Intensity	Impor-	Area	Class	Comments
Date	Spread	THOGHSTON	CBIICO	III peut	01455	o one so a so
1956						
Mar. 21	4-18 33-45 34-51 37-42 52-56 72-81 87-96 88-89 102-119 121-155 167-168 175-176 187-200 208-212 214-223 230-237 241-246 280-292 287-294 319-320	N56 N21 N21 N21 N9 N32 N32 N39 N39 N39 N74	C	280 170 155 120 130 85 145 145 165 165 165 165 165 165 165 165 165 16	AND AND ASA BSS ANC AND ASA BSS AND AND AND AND AND AND AND AND AND AND	Streamer
Mar _。 22	358-14 23-35 42-46 51-56 69-71 80-81 109-117 217-226 236-246 262-270 271-272 305-315	N57 N38 N21 N13 S16 S47 S24 N19 N27 N65	D + D + D + D + D D + D D + D D + D D + D D + D	335 140 65 115 15 15 20 85 115 20 375	And And Anc Bns Anm And Cns s And And And And	Streamer
Mar. 23	345-346 357-6 9-15 21-31 43-53 53-69 72-88 78-81 109-114 210-223 236-241 249-258 262-266 266-270 319-331	N77 N62 N52 N16 N16 N19 N19 N19 N24 N80	D	15 125 200 240 220 300 180 50 225 85 95 130 100 90 1050	ANSA ANCA ANCA ANCA ANCA ANCA ANCA ANCA	Very faint Ascending ?

Da te	Spread	Lat. of Center of Intensity ^o	Impor-	Area	Class	Comments
	Spread	Hicensica	08100	LLL Poun	32435	3000000
1956						
Mar. 24	336-2 7-13 18-26 33-37 41-53 50-52 58-62 63-66 68-79 82-90 96-97 110-115 120-148 158-192 193-204 208-209 213-216 220-238 231-242 243-245 247-262 293-306 293-306 293-306	N74 N5429 N51 N51 S32 S68 S300 N120 N568 S300 N120 N569 N79		2570 110 100 100 100 100 100 100 100 100 1	BNs s ANd ANM ASE ANM AND ASI? AND ASS BNs s ANM BNs s ANM BNs a ANM AND AND AND AND AND AND AND AND AND AND	or BSs?
Mar _o 25	336-4 6-12 14-26 28-34 43-51 45-49 59-60 62-64 68-77 73-82 78-90 96-102 109-119 123-135 153-154 183-200 210-211 221-236 243-260 260-262 261-266 267-289 285-301 299-307 316-318	N73 N551 N318 N17 N1 S6 149 S8 138 S 16 S 16 S 17 N21 N21 N21 N21 N21 N21 N21	De Carolina De De De Carolina	45 140 160 160 160 160 160 160 160 160 160 16	BNs s ANM ANd ANd ASa BSs ANc ANc ASa BSs ANm ANd BNs BNs ANd BNs	

		Lat. of Center of	Impor-	Area	(1) 0.00	Commanto
Date	Spread	Intensity ^o	tance	in paus	CIRSS	Comments
1956						
Mar. 26	4-18 26 - 35	N53 N35	C+ C	300 210	ANd ANd	Streamer
	45-59 75-78 77-80 104-123 150-151 191-196 218-226 238-247 260-270 273-277 283-290	N13 S12 S14 S83 S51 S22 S2 N20 N31 N42	C= D= D= C+ D= B C= D=	320 20 15 475 10 160 30 425 260 15	And BSs ASs And BNs? Anc And And And And And	Poor seeing n n n n n n n n n n n n
Mar. 27	297-301 346-347 5-12 15-16 24-27 34-50 83-86 91-94 107-125 158-159 189-196 212-229 237-250 255-269 271-278 288-300 312-319	N54 N76 N55 N48 N38 N23 S21 S28 S51 S82 S51 S82 S14 N16 N29 N50 N70	D* D= CD= DC+ DCC+ DCCD CDCCD	140 5 230 5 15 15 50 360 375 380 265 200 50 20	ANM BNS,S BNS,S BNS,S ANM ANA? ANA AND AND AND AND AND AND AND AND AND	or ASa?
Mar _o 28	3-22 34-40 44-48 46-57 52-55 145-146 158-167 188-202 212-220 240-244 256-272 277-292	N56 N25 N19 N15 N11 S79 S80 S50 S19 S2 N21 N41	B. ≠ D. † D. ⇒ D. ∞ C. D. B. □ D. †	525 100 50 70 25 15 190 60 350 75 275 325	ANd AS1? BSs's ASe BNs ANd ANd S? a ANd	Poor seeing all day Dome-shaped
Mar. 29	6-12 20-30 39-43 44-56 87-90 116-121 182-183 194-198	361	C+ D= D= C= D= D= D= D=	260 15 150 210 20 50 10	ANM BNsss ASI ANds ANM ANM AND BNs AND	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956						
Mar. 29 (cont.)	210-217 240-243 260-261 267-270 277-293	S31 S2 N17 N25 N42	D+ D D- D- B-	11,0 55 25 70 380	ANd ANd ANc? ASa ANd	Poor seeing
Apr. 1	337-348 354-11 13-20 23-38 29-45 52-56 57-61 70-73 77-82 88-92 94-101 116-119 138-139 156-157 186-203 221-227 224-231 235-255 256-271 280-298	N79 N62 N48 N33 N30 N11 N5 S16 S26 S34 S53 S48 S48 S18 N142	Dos B Dow D D D D D D D D D D D D D D D D D D D	15 57 10 115 270 45 40 40 40 40 40 40 40 40 40 40 40 40 40	BNs s ANA ANA ANA ANA ANA ANA ANA ANA ANA AN	
Apr. 2	350-4 4-22 21-45 29-39 70-78 115-121 126-130 146-147 218-230 234-248 248-301	n68 n58 n34 n30 s10 s54 s65 s80 s20 c	C C D# D# C D D C A #	350 185 190 85 100 140 35 175 260 1950	And And Asa Bss,s And And Anm? Bns And And And	Streamer
Apr. 3	344-356 2-6 41-45 46-49 66-67 71-80 84-89 115-124 200-208 210-214 215-223 221-229 229-236 241-268 275-276 286-288 290-301	840 832 825 820 811 N12 N32	C+ D+ D D C+ D D D D D B D P C	425 90 70 50 10 10 10 10 10 10 10 10 10 10 10 10 10	ANd ANm ANd#? BSs BNs ANd BNs S ANm ANd BSp BSs ANd ANd BSs ANd ANd	

	Q	Lat. of Center of	Impor-	Area in pouo	Class	Comments
Date	Spread	Intensity	rance	m paus	Olass	COMMISSION
1956						
Apr. 4	341-350 359-9 14-26 38-44 63-67 69-74 75-77 78-81 118-119 140-141 200-206 212-225 223-234 245-246 266-270 270-274 292-312	N79 N59 N452 88 812 815 814 821 814 N28 N28 N52	C C C C C C C C C C C C C C C C C C C	265 150 225 215 50 55 30 25 10 160 180 500 20 60 2125 230	And And Asf And Bss And Bns And Bss And Bss And Bss And Bss And	
Apr. 5	4-24 42-52 62-87 102-110 196-200 215-217 219-223 228-232 232-243 249-252 259-261 264-269 275-284 295-300 297-301 327-336	N47 N16 S42 S46 S23 S14 S5 N16 N25 N56 N56 Y83	B.* C.C.D.D.D.C.D.D.D.C.D.D.C.D.D.D.C.D.D.D.C.D.D.D.C.D.D.D.C.D.D.D.C.D.D.D.C.D.D.D.C.D.D.D.C.D.D.D.D.C.D	475 170 290 265 20 50 160 100 200 755 25	ANd ASa? ANd ANd ANd ANa ANa ANd ANc BSs ANd ANd ANd ANd ANd	
Apr. 6 (cont.)	358-19 41-53 43-49 69-70 78-79 81-87 87-92 93-94 101-107 129-130 149-154 161-194 196-200 213-219 225-235 228-237 237-247	N50 N18 N18 S6 S15 S24 S30 S65 S68 S68 S28 S14 S13 S2	C+ D+ D-	350 80 10 55 30 15 50 15 15 15 15 15 15 15 15 15 15 15 15 15	ANd ASA BSs,s BNs BNs ANC* ASA BSs AND BNs,s BNs's AND AND AND AND	

Date	Spread	Lat. of Center of Intensity ^O	Impor-	Area in pou.	Class	Comments
1956						
Apr. 6 (cont.)	249-261 255-257 258-273 278-291 296-299 297-302 307-321	N12 N12 N22 N38 N53 N55 N66	C D C D* D*	330 50 115 215 170 100 25	ASI BSs ASa ANd? ASI BSs BNs s	
Apr. 7	1-20 34-52 82-93 104-105 110-112 120-121 135-136 151-152 195-197 224-229 233-237 241-252 260-268 270-272 280-285 287-294 295-297 297-301 318-319	N51 N20 S41 S47 S56 S71 S848 S17 S10 N27 N138 N138 N155 N155		480 3250 150 150 150 150 150 150 150 150 150 1	And And Bns And Bns Bns And Ast And Ast And Bss Bns And Bns Bns Bns	or ANm?
Apr. 8	349-5 6-18 27-37 39-50 42-45 50-53 55-67 72-75 75-94 78-87 96-100 103-106 106-108 115-117 123-150 163-186 192-202 212-213 223-230 231-251 273-284 288-294 297-300	N68 N51 N32 N19 N20 N12 S19 S19 S140 S140 S149 S149 S18 S18 S18 S18 S18 S18 S18 S18 S18 S18	03***	2500 1350 1350 1350 1350 1350 1350 1350 1	BNs s ANd ASa BSs ANcs ANd ANd ASa AS1 ? BSs BNs s BNs s BNs s ANd BNs BNs s ANd BNs BNs ANd	

		Lat. of Center of	Impor-	Area	2.5	
Date	Spread	Intensity	tance	in pous	Class	Comments
1956						
Apr. 9	9-16 22-48 49-52 54-63 75-99 85-90 190-198 224-231 264-283 291-302 323-334	N52 N34 N14 N5 S22 S23 S51 S17 N31 N54 N73	C A D D+ D D+ C D + C	180 1300 35 160 320 75 170 45 315 100 20	And BSs And AS1 BSs And Anm m And And BNs 's	
Apr _o 10	6-16 20-49 60-67 189-198 264-266 271-282 293-306	N55 N37 N1 S52 N21 N31 N53	C= AG D C D= D	165 1175 60 300 20 70	ANd ANd? ANd? ANd ? ANd	Poor seeing all day
Apr. 11	345-354 0-14 11-33 35-52 68-79 79-88 84-85 89-96 101-107 189-198 220-221 230-232 238-241 268-276 294-300 303-306	ท73 ท45 ท19 87 819 829 840 85243 8429 860	D A B C D D C D D D D D D D D D D D D D D D	25 225 1450 850 290 25 170 65 400 10 35 130 70	BNs s And And And BSs,s ASa And BSs? And BNs And BNs And And And	Magnificient example or ANa?
Apr. 12	358-1 9-14 20-24 29-33 38-58 59-65 70-71 89-91 91-92 95-108 137-139 188-196 208-210 220-240 252-253	N65 N52 N42 N32 N19 N2 S7 S28 S39 S35 S15 N8	D = D = C + D = C	30 75 50 50 32 140 25 15 20 165 15 20 20	And And And And Ast Bns*s Bss And Bns And Bns And Bns	

Date	Syre of the	Lat. of Center of Intensity	Impor-	Area in pouc	Class	Comments
1956		-		-		
Apr. 12 (cont.)	262-273 278-290 297-311 332-333	n23 n40 n60 n84	0 D= 0 D=	280 15 235 20	ANd BNs s ANd BNs	
Apr. 13	10-14 23-31 31-34 56-68 84-91 93-108 186-191 214-221 252-254 258-268 271-275 275-279 303-310	N53 N37 N31 N2 S24 S36 S56 S28 N9 N18 N29 N33 N61	DD	25 85 80 360 185 140 150 40 110 70 35 270	BNs's? ANd+ ASI ANd ANd ANd ANd ANd ANe+ ASs? BSs ANd	Poor seeing all day or BSs7
Apr. 14	5-10 16-24 35-36 46-61 92-92 80-88 214-21 130-131 143-144 272-28 214-27	N57 N44 N6 N6 N6 N6 N6 N6 N6 N6 N6 N6 N6 N6 N6	Do D	155550 155550 1500 1500 1600 1600 1555 1500 1550 1500 150	BNs,s ANd ANd BSs BNs BNs BNs ANm ANd ANd BSs BSs ANd ANd ANd ANd ANd ANd ANd ANd ANd ANd	Streamers Streamer
арг _е 25	10-12 16-18 32-33 39-87 184-187 211-224 234-246 260-263 261-272 270-278 283-288 311-305	N53 N47 N5 N5 848 825 NX8 N20 N20 N28 N42 N59	D D D D D D D D D D D D D D D D D D D	20 40 25 1700 40 60 110 40 120 50 50	ANC ANM AND AND AND AND AND AND ASA BSS7 AND AND	Peor seeing all day

Date	Spread	Lat. of Center of Intensity	Impor-	Area in pouo	Class	Comments
1956	op. oz	_				
Apr. 16	357-358 14-18 27-84 84-97 90-92 99-104 133-147	N67 N48 N12 S23 S27 S38 S70	D and	5 40 2900 260 25 90	BNs ANd ANd ASa BSs ANc BNs	Arching streamer
	165-191 197-209 215-224 226-232 235-236 262-265 270-273 274-278 279-285 302-307	556 542 525 517 59 N19 N28 N33 N38 N59	D- B- D- C- D- D- D- D-	30 435 45 140 5 30 20 100 15 70	BNs s ANd ? BSs? BNs ASa BSs ASf? BNs s And	or ANm?
Apr. 18	6-12 33-37 41-52 52-56 76-82 77-79 82-89 86-87 88-91 99-112 132-133 196-201 223-243 265-269 270-277 281-288 300-309	368 345 311 9 N23 9 N23 7 N29 3 N39	D - D - D - D - D - D - D - D - D - D -	65505000000000000000000000000000000000	AND PROPERTY OF THE PROPERTY O	Foor seeing all day Good example
Apr. 19	340-34: 8-16 29-44 43-55 68-94 93-96 100-11: 133-15: 187-19 202-20 231-24 263-27 265-26 271-27 282-29 293-3 338-3	N52 N31 N11 S20 S30 S40 S49 S41 S S41 N24 N28 N28 N40 N61	D- CD Cで B+ D- D- D- CD- CD- CD- CD- CD- CD- CD- CD	15 180 140 300 880 100 365 25 70 20 160 120 60 190 105 500	BNS ANM BSS AND* AND* AND ASA AND AND AND AND AND AND AND AND AND AN	Arching streamers

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956				• • • •		
Apr. 20	2-14 41-47 51-59 54-59 76-84 93-95 107-114 189-194 223-232 237-238 250-251 256-262 263-271 270-279 271-284 295-311 331-347	NSU NSU NSU NSU NSU NSU NSU NSU NSU NSU	C++	360 120 110 20 60 70 240 90 55 200 150 775 20	AND ASS. ANO ASS. ANO AND AND AND AND AND BNS BSS? ASS. ASS. ASS. AND BNS, BNS, S	Streamer
Apr. 21	356-357 1-12 29-33 42-61 45-54 63-66 77-79 85-91 93-95 104-116 119-120 130-157	n68 n55 n33 n12 n15 0 s13 s23 s30 s47 s56 s77 P.A. 180	D- C- D- D- D- C+ D- D- 31	10 205 25 165 85 40 35 240 10 35 missi	BNs ANd ANe BSs ASs ASs BSs? BSs's ASf BSs? BNs BNs's	Streamer or ANd? or ANd? Omitted in the Analysis
Apr. 22	337-338 346-348 359-11 18-20 41-47 64-70 71-87 73-78 89-94 94-96 110-117 111-119 122-156 166-206 209-225 243-245 252-259 252-265 252-265 262-287 292-308 303-335	N84 N76 N45 N45 S31 S21 S51 S52 S53 S53 S53 S13 N17 N31 N17 N31 N18 N56		10 15 375 155 100 65 120 155 1750 105 105 105 105 105 105 105 105 105 1	BNs BNs ANd ANm ASa AS1,f BNs's AS2? ANC ASa BSs? BNs's BNs's ANd+? ANC BNs's	Arching streamers or ANe?

Date	Spread	Lat. of Center of Intensity ^o	Impor- tance	Area in p.u.	Class	Comments
1956						
Apr. 23	333-19 347-348 2-5 24-46 51-59 112-120 157-200 165-166 203-218 217-226 221-227 228-236	N68 N76 N61 N31 N5 S50 S65 S79 S33 S19 S22 S14	D- D- C * D- C D- C *	50 20 30 325 20 250 45 40 275 150 100 105	BNs s AND AND AND BNs s AND BNS s AND AND AND ASI	Arching streamer
	243-247	S1 N30 NE 6	D A D	50 1450 50	BSs? ANd ANd	Streamers#
Apr. 24	296-304 341-22 27-41 46-68 78-92 100-109 111-119 121-161 192-194 200-204 204-217 219-225 236-235 236-241 246-252 271-292 291-298 278-303 306-339	N56 N672 N8849 S3494 S349 S3494 S3431 S38 S48 S38 S38 S38 S38 S38 S38 S38 S38 S38 S3	D-	60 60 50 150 150 150 150 140 140 150 150 150 150 150 150 150 150 150 15	BNs s ANd ANd ASa ANd ASa ANd ASa ANd BSs s ANd ASa BSs s ANd ANd BNs s	Streamers
Apr. 25	333-7 9-11 24-31 37-51 64-72 72-90 96-109 110-120 165-166 175-182 190-194 207-214 212-215 219-224 234-234 234-234 245-247	N74 N58 N22 S17 S36 S48 S79 S55 S32 S32 S14 S1		90 30 70 200 25 280 40 310 20 80 125 60 100 245 20	BNs s ANA ANA BSs? ANA BNs BNs BNs ANA ANA ANA ASa ANA ASa ANA ? BSs?	

Date	Spaced	Lat. of Center of Intensity	Impor-	Area	Class	Comments
	Spread	Incensica	ratica	In p.u.	OTGSS	O milettos
1956 Apr. 25 (cont.)	252-278 284-289 294-306 304-305 314-325 329-330	N15 N41 N55 N59 N73 N82	B D D+ D- D-	650 40 95 15 30 40	ANd BSs? ANd ASa? BNs°s ANa	Streamer
May 1	337-0 0-5 6-7 18-20 30-35 36-51 37-49 53-72 77-83 88-92 95-105 108-110 113-124 167-200 205-213 213-226 238-239 244-255 256-276 299-336	N79 N63 N59 N44 N23 N63 S333 S5768 S58 S57 S58 S58 S58 S58 S58 S58 N44 N24 N61		35 170 150 150 150 150 150 155 155 155 155 15	BNs s ANM BNs, s ASa AS1 BSs s BNs s BNs s ANd AND AND AND AND AND AND AND AND AND AND	
May 2	340-342 359-6 18-27 30-48 46-50 54-63 66-79 82-99 100-123 136-161 197-208 212-222 216-229 222-227 238-239 263-277 278-289 291-305 311-3,9	N84 N74 N44 N27 N17 N8 S7 S48 S40 S36 S28 S28 N24 N51 N77	D C C C D D C D B D C D C D C D C D C D	20 280 175 195 75 40 25 450 180 180 190 190 195 25 45	BNs ANM ANd BSs's? ANc: ASa ANd BNs's ANd: ASa BSs's ANd BNs ASf BNs ANd BNs	Streamers

Date	Spread	Center of Intensity		Area in p.u.	Class	Comments
1956			٠		•	
May 3	334-357 357-6 14-25 35-39 44-47 59-62 77-87 107-119 133-147 157-175 193-204 216-229 218-224 232-237 251-259 261-292 294-311 307-316	N80 N65 N47 N29 N5 3 N5 347 N5 347 S 25 S 25 S 25 N66	D = 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3	55 270 430 55 40 55 15 120 130 180 180 150 15	BNs s ANd ANd s BSs? ANm BNs s ANd BNs s ANd ASf ANd ASf ANd ASs ANc ANss BNs s BNs s	
May 5	341-343 353-4 19-33 39-46 48-50 50-59 58-76 79-95 82-91 102-106 111-112 160-183 192-197 129-222 231-239 246-251 258-266 286-306 296-298 306-309 327-339	N83 N67 N44 N9 90865395530 N127 N9 90865395530 N127 N431 N61 N61 N86	D C # C C - D - D - D - D - D - D - D - D - D	353260 6500 6500 6500 6505 6505 6505 6505 6	ANM AND AND AND AND ASS AND ASS ANC BNS BNS ANM BNS ANM ASS AND	Arching streamer Ascending arch
May 6	338-350 351-2 6-9 16-23 32-35 37-45 46-51	N83 N71 N59 N49 N34 N26 N19)- 0. 0. 0. 0. 1. 0.	20 135 20 115 20 300	BNs s and BNs s and BNs, s and BNs, s	Arching streamers

Date	Spread	Lat, of Center of Intensity ^o		Area in p.u.	Class	Comments
1956						
May 6 (cont.)	57-66 81-90 67-88 90-97 172-173 191-195 203-207 208-228 242-247 269-280 288-292 312-335	N8 S17 S20 S26 S75 S42 S42 S31 S2 N42 N75	C D C D D B D B D	190 200 15 210 5 45 80 170 500 25 30	ANma ASa BSs ANda BNs ANm BSs? ANd ? ANd ANd BNs?s	Streamer or ANc?
May 7	336-340 9-10 10-15 13-18 32-49 68-70 76-80 80-86 82-90 90-100 190-202 227-230 233-236 299-304	N86 N55 N51 N27 32 311 819 830 8514 819 813 N54	D- D- D- D- D- D- D- D- D- D- D- D- D- D	15 10 85 80 165 90 55 70 85 70 235 10	BNs,s BNs ANa ANd ANd ASf ANm* AS1 ASa ANd* ANd ANd ANd ANd	Foor seeing all day
May 8	6-15 21-22 27-30 31-41 50-52 61-67 75-81 82-94 98-126 137-138 164-189 189-196 209-216 220-221 220-221 225-235 246-258 261-269 273-305	N57 N45 N39 N31 N7 N40 S16 N7 S16 S218 S57 S537 S537 S537 S537 S538 N10 N18 N18 N18 N18 N18 N18 N18 N18	0 + 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	30 1075 200 350 350 350 350 350 350 350 350 350 3	ANd BNs BNs S ANd BNs BSs,s AS1 AS1 BSs BSs C BNs BNs ANd C BSs ANd ANc BSs ANd ANd	or BNs s

Date	Spread	Lat. of Center of Intensity		Area in p.u.	Class	Comments
1956	•	·		-		
May 9	7-11 17-23 32-49 55-63 69-83 96-97 102-108 188-196 225-233 241-260 260-268 270-280	N58 N46 N36 N7 39 330 339 355 319 N8 N17 N29	D+ G G+ D C: D+ B- D C D+	100 215 285 90 275 5 350 120 250 130 325	ANM ANC AND AND AND AND ANM ASA AND AND	Poor seeing all day Arch
May 10	7-23 33-39 43-54 58-61 68-84 86 88 106 111 175 176 188-197 194-195 217-219 221-223 231-236 236-238 242-23 248-250 252-268 263-268 278-283 294-297	N63 N31 N18 N7 58 520 542 554 552 552 510 510 N19 N19 N19 N33 N49		265 60 125 65 65 65 65 65 65 65 65 65 65 65 65 65	AND AND AND AND AND AND BNS AND BNS AND AND AND BSS AND AND BSS AND AND AND AND AND AND AND AND AND AND	Foor seeing all day or ANm?
May 11	7-24 40-44 79-81 82-92 102-122 179-180 188-196 215-217 224-226 240-250 256-270 258-268 277-284 284-285 293-297	N54 N26 S12 S18 S43 S46 S32 S6 S77 N23 N36 N47	B- D- D+ B- D- C+ D- D- D- D- D- D-	550 4050 4050 300 350 350 205 400 550 400 550 550 550 550 550 550 5	ANd ? ANa ANe ANd BNs ANm ANc ANc ANd ANd ANd ANd ANd ANa ANd ANa	Arch

Data	Compad	Lat. of Center of Intensity	Impor-	Area	Class	Comments
Date	Spread	11100113103	081.00	200 8 7 4		
1956						
May 12	8-21 38-40 40-44 55-68 59-61 80-90 81-93 99-121 123-149 187-196 209-227 231-250 261-268 278-290 284-291 303-305 309-311	N51 N29 N26 N7 N8 S18 S19 S41 S67 S32 S6 N17 N33 N39 N56	C+ DD-D-C-+ BD-+ CD-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-	280 75 50 30 180 110 660 35 60 130 140 155	AND BSS ASS ANM ASI, I AND AND BNS'S AND AND AND AND AND ASS ASS AND AND AND AND ASS ASS AND AND AND AND AND AND AND AND AND AND	Arch
May 13	9-13 31-34 35 39 47-61 70 76 76-88 87-94 91-94 100-109 106-111 188-192 259-262 266-283 294-297	N57 N35 N30 S5 S12 S25 S36 S59 N13 N25 N48	D- D- CD+ CD+ CD+ CD+ CD+ CD+	40 30 100 280 75 300 110 75 270 350 20 35 190 210	ANd BSs? ANd ANd ANe ASa BSs ANe ANd ANm BSs ANd ANm	Poor seeing all day
May 14	340-341 1~2 29-39 48-53 56-62 67-88 82-94 92-95 96-99 100-101 113-120 170-171 188-193 220-223 256-271 272-273 278-287 299-301 304 305	SHG 877 858 836 826 N16 N2H N3H N52		10 66550 1390 13550 1550 1600 1600 1600	BNs BNs ANd ANC AST ANd AS; BSs ANC BNs ANC ANd ANC AN	or BNs?

		Lat. of Center of	Impor-	Area	(1) 0 0 0	Comments
Date	Spread	Intensity	tance	in p _a u,	CIRSS	Comments
1956						
May 15	7-17 34-39 45-54 54-67 66-68 75-83 85-89 95-99 99-100 161-197 205-215 227-231 260-273 263-267 274-276 302-306	N57 N33 N20 N9 N2 S10 S18 S28 S30 S69 S38 S20 S12 N16 N26	D- CD+ DC- DD+ DD- DD- CD- DD- DD- DD- DD- DD- DD- DD-	55 190 150 150 150 150 150 150 150 15	ANd ANd ANd ANd ASa BSs ANd BSs ANd BSs ANd BSs ANd BNs SS ANd BNs ANd BNs ANd AND AND AND AND AND	
May 16	337-10 13-19 32-49 49-51 77-86 84-90 100-111 118-161 172-181 185-188 193-198 202-205 212-240 244-245 250-258 260-291 303-307 315-336	N84 N54 N19 S11 S18 S36 S562 S46 S45 S45 N18 N55 N75	D- B D- C D- D- D- D- D- D- D- D- D- D-	35050 62025 120550 13200 1500 1500 1500 1500 1500 1500 1500 1	BNs's ANd BSs ANd BSs ANd BNs's ANd BNs's ANd BNs's ANd ANd ANd ANd ANd BNs's	Part ascending
May 17	333-28 13-17 30-40 44-47 49-54 54-67 71-84 87-90 87-90 94-103 104-115 126-128 130-159 167-181	540 558 571 577	D D C D - D - D - D - D - D - D - D - D	105 70 260 45 20 410 25 315 30 45 20 120	BNs s ANM ANd BSs ASa BNs s ANd BSs ANd BSs ANd BSs ANd BSs ANd S BNs s ANd	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956						
May 17 (cont.)	198-205 230-247 238-243 265-293 303-307	s48 516 57 N29 N56	D- D D B+ D	30 100 7 5 950 7 5	ANd? ASa ANc* ANd ANm	
May 18	333-24 11-15 29-36 41-55 56-61 80-89 84-93 95-98 108-116 117-119 170-180 171-174 185-199 225-231 229-235 231-232 236-243 247-249 260-263 267-292 304-307 308-327	N77 N57 N38 N24 N11 S13 S27 S41 S50 S518 S52 S18 S52 N129 N68	D- D- C+ D+ D- D- D- D- D- D- D- D- D- D- D- D- D-	65 180 300 15 75 100 20 145 15 25 30 190 90 35 20 1100 50 30	BNa s ANd ANd BNa s BSa s ASa ANd ANd BNa s BNa s ANd ANd BNa s ANc ANd ANd BNa s ANc ANd ANd ANd BNa s ANc ANd ANd BNa s ANc	Part ascending in arch
May 19	6-15 24-46 84-104 109-117 179-198 213-223 225-238 246-248 265-269 284-293	N58 N34 S22 S43 S62 S32 S18 S3 N17 N39	D B- C+ D+ D- C D	50 430 280 125 30 245 130 550 80	AND AND AND BNS S AND S AND S AND S AND S AND AND	Poor seeing all day
May 21	5-6 17-18 31-36 32-35 68-85 79-96 112-117 207-215 217-224 232-233 242-243 254-258 256-260 268-277	N64 N53 N31 N37 S5 S17 S44 S39 S30 S17 S7 N6 N9 N22	D- D- B- D- D+ C- D- D- D-	10 15 330 70 650 170 90 18 130 10 15 80 65 185	BNs ANm ANd* BSs? ANd ANd ANd ANd ANd ANd ANd ANd ANd	Arching streamer or ANm?

		Lat. of Center of	Impor-			
Date	Spread	Intensity	tance	in p.u.	Class	Comments
1956						
May 21 (cont.)	281-283 282-297 300-305	N32 N42 N53	D- C+ D-	15 270 15	BSs? And# BNs's	
May 22	19-21 30-41 45-52 64-71 79-89 88-90 96-104 112-132 116-121 191-192 203-210 208-226 210-226 250-258 258-264 258-264 258-287 280-288 283-287 294-302	N51 N36 N20 N4 S18 S349 S48 S48 S48 S48 N19 N19 N345	D- B D D C D D + D + D + D + D - D + D - D + D + D	20 400 75 110 200 65 85 550 125 110 125 110 265 35 20 125	ANM ANC ANC ANC ANC ANC ANC ANC BSS? ANC	Arch Streamer
May 23	343-6 14-16 18-23 33-45 52-58 58-61 63-76 70-77 79-81 81-95 112-120 204-213 221-223 221-223 221-225 230-238 258-278 290-305	N77 N56 N50 N32 N16 N12 S9 S16 S43 S29 S16 N120 N46 N82	D- D	35 50 25 300 130 355 135 1450 20 160 180 5	BNs s ANC BNs s ANC BSs ANC BSS ANC BSS ANC BSS ANC BSS ANC	Streamer
May 24	336-27 12-15 28-61 67-90 69-71 80-86 90-94 94-113 114-123	N71 N58 N31 S7 N1 S12 S22 S31 S47	D+ D B D D- D D+ D	95 60 750 65 25 75 120 35 300	BNs 's ANd ANd BNs 's ANc ASa ANc # BNs 's And	

		Lat. of Center of	Impor-	Area		
Date	Spread	Intensity	tance		Class	Comments
1956						
May 24	124-161	S 69	D-	7 5	BNs's	
(cont.)	165-202 204-206	869 846	D- D-	35 15	ANm	
	219-226	S 29	C+	260	AST	
	227-244	S14	C	240	ANd	
	253-285	N20	D-	55	BNs 's	
	286-289	N37	D- D+	60	ASa	or AVd?
	289-297 299-335	N41 N65	D~	130 45	BNs's	or Atu:
	304-306	N54	D	25	ANm	
May 25	338-341	n 88	D	70	ANa	Poor seeing all day
	358-360	N13	D -	35	AND, b	
	15-18 17-22	N55	D-	30 6 0	ANd ANe	
	23-49	N54 N36	D- B+	950	ANG ANG	Arch
	50-52	N21	D-	25	BSs.	***
	52-54	N19	D-	30	ASa	
	60-62	Nll	D	15	ASa	
	68-69	NL	D-	15	?	
	77-79 81-86	S 6	D	30 50	ANm ASa	
	86-89	ន 12 ន 15	D- D	50 40	BSs	
	89-94	S20	D+	150	AS1	
	119-123	349	D-	50	ANd	
	176-177	S 76	D-	5 65 5	BNs	
	192-196	\$58	Ö	65	ANd	
	208-209	ड्रा इसि	D- C+	5 275	BNs And⇒	
	215-226 217-225	S33 S28	D	80	AST	
	228-250	s 23	$\ddot{\mathbf{D}}$		BSs?	
	265-272	N16	Ð	85	ANa	
	284-287	N34	D -	35	?	
	296-298	N45	D	25	ANd	
	305-309 313- 318	N55 N67	D- D-	25 85 35 25 55 15	ANC BNs 's	
May 26	23-28	N47	D-	15	BNs : s	Poor seeing all day
,	25-37	N38	D+	115	ANo	
	92-106	S 27	C-	200	ANd	
	189-206	\$ 59	D D	55	ANd	
	206-219	S39	D+	130	and# Asf	
	221-225 229-232	328 3 22	C- D-	170 40	å Vot	
	252-254	N1	D D	50	ANC	
	268-271	N17	Ď-	20	BSs,s	
	271-274	N20	Ð	45	ANC#	
	274-276	N23	D-	30	ASa.	
	279-296	N37	D-6-	155	BSs is	
	30 7- 327	и 64	D-	35	BNs 's?	

iate	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956	•					
May 27	18-21 22-24 30-43 48-50 49-55 58-61 83-86 88-112 119-135 167-200 203-217 222-224 239-262 267-274 279-285 286-288 288-307 312-330	N53 N49 N31 N23 N21 N13 S28 S57 S45 S29 S38 N21 N30 N35 N46 N64	D D C ** D D D C ** D D D C ** D D D D B D ** D D D D B D **	85 32 45 45 45 40 15 40 15 40 15 40 15 40 50 15 40 50 15 40 50 15 40 50 50 15 40 50 50 50 50 50 50 50 50 50 50 50 50 50	ANC BSs? ANds AS1 ANd ASa ANds BNs's ANC ANM BSs? ANd BNs's ANC BNs's ANC ANM BSs? AND BNs's ANC BNs's	Streamer
May 28	336-14 18-20 23-26 31-41 47-48 49-54 78-85 92-115 121-128 128-131 170-198 200-206 224-236 243-245 243-283 285-283 286-306 299-331	N80 N549 N3763 N263 N888 S571 S483 S553 S483 N457	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	70 60 75 20 25 65 130 90 130 435 435 435 435 435 435 435 435 435 435	BNs's ANC ANM AND ASA BSS BSS AND AND BNS'S ANC AND	Faint streamer
May 29	335-9 10-13 20-39 41-45 44-46 47-54 61-72 80-89 100-104 108-130 131-157 176-195 197-199 210-215	N85 N61 N39 N30 N28 N20 N7 S10 S29 S43 S69 S73 S55	D- D- C+ D- D- C- D- B+ D- D- D-	40 30 475 30 10 120 40 235 10 750 30 20 25	BNs s ANM ANA ASA BSS ANA BNs s ASf? BNs ANA BNs s ANA ANA	S treamer
• •	•	-		•		

Date	Spread	Lat. of Center of Intensity		Area	Class	Comments
	DP1-680	11100113103	CHICA	III paus	01#32	CO18101109
1956 May 29 (cont.)	223-228 229-237 238-245 245-246 246-249 257-286 291-304 311-334	S27 S22 S11 S7 S6 N22 N46 N72	D+ D D- D- B+ B+	90 100 110 30 115 750 775 40	ANd# ASa ANd BSs ANc# ANd ANd BNs*s	Streamer Streamers Asce ding arch
May 30	336-9 10-12 27-31 34-37 43-58 69-74 75-77 87-88 90-94 101-106 110-111 120-127 133-147 166-201 206-217 225-228 235-241 235-248 258-273 270-304 302-305 315-335	N83 N62 N43 N37 N24 N1 S315 S38 S519 S38 S567 S40 S20 S12 N16 N28 N50 N73	D- D	2505550 720550 7205630 750 750 750 750	BNs's ANM BSs? ANd ANd BNs's ANc BNs's ANc BNs's ANd ANd BNs's ANM ANd BNs,s BSs,s ANd ANd ANd ANd ANd ANd ANd ANd ANd	or ANC? Streaming orANa? Arching streamer
May 31 (cont.)	338-341 7-13 30-38 41-43 44-45 44-47 57-64 85-92 93-94 101-103 113-115 117-118 126-131 188-189 207-215 226-235 226-235 238-249	N86 N64 N39 *32 N30 N28 N13 S19 S14 S43 S43 S43 S23 S14 S9	D- D+ D- D- D- D- D- D- D- D+ D- D- D- D- D- D- D- D- D- D- D- D- D-	25 108 108 109 109 109 109 109 109 109 109 109 109	BNs,s ANd ANd BSs ASa ANc ASa ASa? BSs BSs ANm BNs ANd BNs ANd BNs ANd BNs ANd BNs ANd	Streamer or AS1?

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956	•					
May 31 (cont.)	256-265 270-290 296-307 318-324	N4 N25 N50 N67	D+ A C+ D~	160 1200 275 25	ANd ANd ANb BNs,s	Streamer
June 1	338-4 8-16 27-43 68-85 71-76 88-97 113-117 127-131 139-140 206-211 212-276 223-235 236-249 255-258 260-268 273-292 301-302 303-315	N84 N62 N39 S18 S155 S645 S322 S10 N128 N128 N144 N54	D- C- B D- D- D- D- D- D- D- D- D- D- D- D- D-	55 165 500 80 90 200 15 60 150 210 150 210 170 755 1100 25 325	BNs s ANd BSs s ASa BNs, s ANm BNs ANd BNs s ANd BNs s ANd BNs s ANd BSs ANd	
June 2	359-60 9-16 26-35 35-40 40-49 44-46 48-53 55-66 88-92 107-108 119-123 167-178 205-220 223-226 225-283 241-246 269-292 288-294 307-309 310-315	N75 N62 N48 N35 N35 N30 N20 S13 S36 S31 S31 S12 N36 N58 N58	0-000000000000000000000000000000000000	10 160 170 140 200 450 780 780 150 40 150 40 150	BNs ANd BSs ANc BSp ANd ANd BNs ANd BNs ANc BNs ANc BNs ANd BSs ANd BSs? AS1 BSs ANd AS1 BSs ANd	Streamer or ANm*? Wide and high or ANc?
June 4	9-21 27-52 88-93 97-104 109-125 204-208 221-254 2 78-2 93	N60 N38 S16 S26 S43 S49 S15 N29 N56	B C D +- B+- D C +- C +-	480 325 65 90 1050 50 335 440	ANd ANd ANd? ANd ANm ANd ANd	Poor seeing n n n streamers Poor seeing

Selection to

Date	Spread	Lat. of Center of Intensity	Impor-	Aroa in noue	Class	Comments
1956	-p- 0	2	02.00	20. Pine	~~~~	0011101710
June 6	353-7 11-26 34-35 46-53 48-54 54-61 77-91 94-108 111-132 137-153 161-197 200-212 215-222 225-235 230-240 252-253 262-264 264-270 282-290 295-306 300-305	N76 N47 N126 N15 N75 N7 N7 N10 N146 N146	D- B - D D D - B - D D B - D D D D D D D D D D D D D D D D D D D	3525 620 960 1520 960 1520 960 1520 960 1520 960 960 960 960 960 960 960 960 960 96	BNs s ANC BSs s ANC BSs s ANC BNs s ANC BNs s ANC BNs s BNs s ANC	Arch Part ascended
June 7	343-1 9-26 28-44 44-49 48-53 56-60 80-100 95-104 112-114 118-135 170-201 203-210 226-228 232-240 236-263 246-263 246-281 284-290 291-292 298-300 299-303 310-313	N36 N59 N430 N19 N19 S14 S23 S37 S673 S49 S13 S13 N150 N155 N150 N155 N155	- B C D D C B D D C D D D D B D D D D D D	3523110750 05555 10750 055550 0550 050 05	BNs s ANd BSs s AND S BNs s AS1 ANd BNs s AND	Streamers High loops

Date	Spread	Lat. of Center of Intensity	impor-		Class	Comments
1956	Dp. Uu-					
June 8	339-343 6-34 39-49 50-53 59-61 85-107 117-131 202-208 249-251 270-283 292-305 296-310	N84 N65 N40 N26 N20 S349 S55 N20 N43 N51	D- B+ D- D- B- C- C-	10 970 75 20 40 380 500 170 10 270 250	BNs,s ANd ANd BSs ASa ANd ANd ANd ANd ANd ASf,f BSs?	Streamer Arch or BNs's
June 9	345-12 17-21 29-38 34-49 51-62 63-72 81-85 100-116 119-127 127-135 144-145 168-194 200-233 236-239 249-269 265-274 278-281 284-294 292-295 295-314	N77 N59 N42 N38 N33 N19 N55 S55 S577 S520 S11 N20 N30 N47	D- D D C - D - D D C - D - D - D - D - D - D - D - D - D - D	35 70 75 115 95 40 175 20 175 20 175 20 175 25 275 375	BNs s ANM ANd ASA AND ASA BNs s AND	Streamers
June 10	340-351 17-19 30-32 33-39 37-46 39-51 41-48 54-56 57-59 61-64 68-90 112-121 129-134 201-208 216-237 268-274 276-278 278-287 300-315	N87 N60 N47 N41 N37 N33 N20 N15 N4 S558 N19 N19 N19 N19	D- D- D- D- D- D- D- D- D- D- D- D- D- D	15 20 15 185 185 185 185 290 180 290 180 85 255 180 260	BNs s ANm ANm? ANd ASf BSs s AS1 AS2 BSS s ANd ANd ANd ANd ANd ANd ANd ANd ANd ANd	or BSs?

5 . 4		Lat. of Center of	Impor-	Area		
Date	Spread	Intensity	tance	in p.u.	Class	Comments
1956						
June 11	332-6 10-20 33-34 36-43 45-55 63-70 68-69 73-80 79-82 86-90 101-109 116-135 175-189 201-249 201-249 261-265 285-310 305-308 311-313 315-327	N90 N63 N39 N30 N10 S 3 S 26 S 35 S 35 S 35 S 35 N 123 N 139 N 139 N 139 N 139 N 139 N 149 N 154 N 162	D- D- C- D-	50 175 1850 1850 1850 1850 1850 1850 1850 185	BNs s ANd BNs ASf ANd ANc BSs ASf ANa ASl BNs s ANd BNs s ANd ANd BSs ASf ANd	
June 12	345-358 25-33 37-39 42-59 54-64 55-58 63-71 74-95 83-85 97-108 110-117 120-138 132-148 148-150 1237-240 237-240 253-288 291-309 312-313 315-320	N67 N49 N40 N20 N20 N56 S28 S36 S36 S37 S30 N55 N55 N55 N55		20 10 10 15 15 15 15 15 15 15 15 15 15 15 15 15	BNs s BNs s BNs s BNs s BNs s ASa BSs ASa ANd s ANa ASa BNs s ANd s BNs s ANd	Streymer or ANc?
June 13	337-6 18-20 23-31 40-57 58-63	N89 N60 N52 N32 N19	D- D- D C+	45 40 55 325 60	BNs's ANC ANC ANC ANC ANC	
(cont.)	60-62	N17	D	70	AS1	

Date		Spread	Lat. of Center of Intensity	Impor-		Class	38 Comments
1956					•		
June (cont		63-64 69-87 85-88 87-96 88-102 106-110 109-111 110-118 200-206 214-223 233-234 243-251 253-255 273-284 278-301 312-321	N16 N3 S12 S16 S29 S31 S36 S43 S43 S43 S13 N17 N31 N67	DB	20 600 150 85 150 100 35 250 110 15 25 250 425 175	ASI AND AND BSS ASS ANM AND AND AND BNS BNS SNS AND AND AND	
June	14	345-22 26-30 37-52 58-65 70-99 92-96 97-103 111-118 172-178 203-210 215-218 223-225 227-249 231-235 238-256 257-258 259-262 281-300 312-320	N79 N51 N36 N18 O S16 S20 S37 S53 S53 S53 S53 S55 S11 N31 N59	D = D = D = D = D = D = D = D = D = D =	40 440 130 1350 35 300 230 15 40 65 100 35 20 60 425 120	BNs s ANM AND AND AND AND AND AND BNs s AND BNS AND AND AND AND	Arching streamers Arch Streamer
Jun 1		340-12 16-17 27-30 38-56 57-64 73-88 88-97 91-98 96-101 108-113 116-119 154-155 172-200 207-211	N85 N63 N52 N35 N20 N1 S13 S19 S31 S37 S75 S76 S52	D D-	35 20 50 375 110 450 175 140 130 160 70 20 30	BNs's ANa BSs? ANd# ASf,f ANd# ASa BSs's AS1 ANd BSs? ANd BSs? ANd	or ANm? Streamers or ANm?
(cont.)		218-223	S39	D-	10	BNs 's	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956	•				~ 	
_	00m ol. 1		_			
June 15 (cont.)	227-241 237-249	S 22 S16	C D	230 115	ANd# ASa	
	257-266	N2	D	225	DKA	
	287-296 302-305	n28 n40	C	200	ANC#	Streamers
	309-310	N 50	D- D-	40 15	BSs? BNs	
	316-320	N58	Ď	70	ANm	
June 18	349-5	N83	D-	10	BNs 1 s	
	21-26	N57	D	65	ANd	
	33-45	ито	D+	115	And*	
	41-50 51-53	N35 N29	D D	175	ASI	
	58-61	N21	D	30 25	ANC ASa	
	64-67	N15	D	45	ANC	
	70-91	NI	C+	500	ANd	
	125-128	SU5	D	40	ANd	
	162-196 198-201	881 862	D- D	35 45	BNs's	
	207-229	548	B	750	ANM ANd#	Streamers
	232-236	S 28	D-	40	ASa	Soleamers
	डारे०-डार्गर	S19	D	75 55	ANd	
	277-285	N22	D D	55	ANc	Streamer
	293-301 316-322	N36 N58	D+ D+	110	ANd	
	320-323	N 59	Ď	130 40	and and	
	325-345	N71	D-	25	BNs's	
June 20	343-26	N82	D	55	BNs 's	
	31-33	N 50	D-	55 25	ANC	
	42-50	N36	D+	110	ANd	
	51-60 64-74	N12 N26	D C+	100	ANd	
	78-80	N3	D	330 40	and BS s	
	91-105	S 19	Ď+		ANd#	
	105-106 124-131	s S lį	D-		ASa	
	124-131	345	C+	210	Alfm	
	164-193 194-215	8 87 8 57	D- B	50	BNs's	A A
	217-220	S43	D-		and BSs?	Arching streamers
	225-243	S Ž 3	C-		ANd#	Arching streamers
	243-249	317	C-	175	BSs	
	250-262 276 - 282	S5	Ç-	290	ANd	
	295-311	N17 N42	D- C -		ASa	
	311-323	N57	B-		ANd ANm	
	324-339	N67	D-		BNs v s	
June 21	342-351	N85	D-	15	BNs,s	Poor socies at A.
	21-43	N52	D		ANd	Poor seeeing all day Streamer
	27-33	N53	D	120	ANe	
(cont.)	3 9-55	N35	C-		and	
(come.)	77-78	N4	D-	15	ANC	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956	ope van	2110011111	04100			
June 21 (cont.)	87-89 105-110 113-117 125-131 195-202 205-210 209-217	8 6 8 25 833 845 864 855 851	D- D+ D C C+ C-	10 140 65 180 275 165 225	BNs,s BSs AS1? ANm? ANm? ANe	
	229-247 256-257 266-268 274-276 297-311 312-323	831 86 N5 N13 N40 N56	C+ D- D- C+ B-	650 5 20 40 3 7 5 450	ANd BNS ANM AST ANd ANd	Arching streamers
June 22	340-21 33-47 51-53 71-101 106-113	N83 N46 N31 S2 S27	D C+ D- D- C	85 550 20 55 12 0	BNs is ANd # ASa BNs is BSs is	Arching streamers
	108-112 125-126 137-142 143-167 168-197	827 842 856 873 881	D- D- C D- D-	30 10 135 30 45	ASa BNs ANm BNs 's BNs 's	
	198-207 212-214 220-229 231-249 260-262 267-278	958 950 938 920 92 N10	C D- C+ D	225 15 20 350 100 155	ANd ANC BNs 8 s ANd ANa ANa	Arching streamers
	281-288 290-292 297-311 308-323 327-340	N21 N28 N40 N55 N70	D- D C B	20 70 180 525 20	BNs s BSs ANd ANd BNs s	
June 25	348-8 22-31 38-47 47-54 64-65 64-72 72-73 90-98 95-103 116-126 133-136	N86 N58 N42 N32 N19 N16 N12 S10 S13 S36 S50	D- C+ D- C+ D- C- C-	250 80 30 30 30 30 17 85 40	BNs 8 s ANd ASa BSs ESa ANO* BSs ANd* AS1 ANd ANM	
(cont.)	177-178 202-223 240-241 243-249 248-258	586 ଥ୍ୟ 5 23 518 59	D- B+ D- D+ D	10 950 30 105 160	Bns And Asa Bss Asf	Arch

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956		•				
June 25 (cont.)	253-260 268-276 276-283 297-320	910 N8 N16 N42	D D D- B-	75 110 60 390	BS: ANd# AS: ANd	Streamer
June 26	20-33 36-50 58-65 64-81 88-89 92-106 114-126 134-136 144-162 163-166 209-233 234-242 241-248 245-265 266-287 280-283 286-287 301-315 318-321	n58 n41 n22 n14 s336 s566 s680 s680 s48 s214 on16 n16 n122 n14 n54	B-+ C C+ D B D D D D D D D D D D D D D D D D D	475 3150 950 1505 1505 1500 1750 1750 1750 1750 17	AND AND AND AND AND AND AND AND BNS'S BNS,S AND AND AND BSS ASS ANO BSS BSS ASS ANO BSS BSS AND BSS ASS AND AND BSS ASS AND AND BSS ASS AND AND	Ascending Part ascending Arches
June 27	20-33 49-57 52-56 64-66 74-82 86-103 122-127 201-202 214-229 229-248 244-250 262-269 269-285 274-277 288-297 305-313	N57 N32 N31 N20 N7 S11 S40 S45 S18 S1 N13 N10 N26 N45	B	500 45 50 45 60 300 160 10 800 165 165 165 200 375	ANd BSS ASA ? AND AND BNS AND ASA AND AND ASA AND ASA AND ASA AND ASA AND ASA AND ASA AND ASA AND ASA	Poor seeing all day Arch Ascending arch
June 28	355-15 16-35 41-46 52-54 55-59 57-58 66-69 77-82	N79 N60 N43 N33 N29 N29 N19	D- B D- D D- D- D-	30 700 10 55 80 20 35	BNs's ANd BNs's ASa AS1 BSs ASa ? ANo	

Date	Spread		Impor-	Area in p.u.	Class	Comments
1956						
June 28 (cont.)	87-98 98-107 108-114 119-135 123-131 126-129 217-229 229-233 230-249 243-245 262-269 274-301 307-315	84 817 823 845 841 841 836 829 828 828 847	C- C- C- C- C- C- C- C- C- C- C- C- C- C	325 165 90 150 80 450 450 20 33 50 50 50 50 50 50 50 50 50 50 50 50 50	And+ Asa Bss And+ Asi Bss And+ Asa Bss And And	Arch
June 29	15-29 29-35 36-60 46-49 64-67 68-69 75-77 91-104 98-105 106-116 118-139 144-149 171-172 193-205 211-225 226-268 274-280 288-302 314-318	N63 N41 N39 N10 S16 S42 S41 S68 S47 S17 N10 N31 N31 N50	0	250 550 550 355 60 355 60 1550 1550 7305 105	And# AS1 BNs 8 ANC ASA BSS AS1 AND# ASA BSS 8 AND# ANC BNS 1 ANC AND	
June 30	0-6 20-27 41-42 45-50 70-80 92-95 95-100 101-123 120-139 175-176 192-193 216-222 231-256 247-278 301-304 314-318	836 845 887 875 848 824 87 830 835	D- D- D- D+ B- C+ D- B- D- D- D- D- D- D- D- D- D- D- D- D- D-	15 100 500 150 85 130 600 37 50 1600 20 20 70	BNs s ANd ANC? ASC BSs? AND AND BNs BNs AND	Streamers Streamers

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Date	Spread	Lat. of Center of Intensity	Impor- tance	Area in p.u.	Class	Comments
1956						
July 1	10-11 21-25 45-46 58-64 80-83 95-99 106-122 131-139 211-220 230-243 249-264 266-267 275-278 301-304 314-317 327-328	n76 n60 n61 n55 n55 n60 n76 n60 n60 n60 n60	0+- 00008-008-0000	15 100 15 40 75 100 675 200 120 550 20 80 25 10	? ANM BNS AND	Poor seeing all day Streamer
July 2	14-24 48-51 77-93 104-109 113-141 168-176 205-221 230-257 256-259 266-268 275-277 286-291 299-304	n69 n38 n6 s20 s42 s84 s58 s31 s9 o n9 n22 n35	D+ D- B- C+ C+ D- C- B- D- D- D- D- D-	165 30 750 15 325 400 575 90 535 40	ANd ANM ANd BNs,s ANd BNs's ANd ANd ANd ANd ANd ANC ANC	or BSs?
July 3	338-14 16-26 36-47 49-51 52-67 58-62 60-67 66-72 78-102 115-147 153-203 204-228 214-216 232-244 260-272 279-286 286-287 290-323 311-316 322-337	N86 N67 N38 N38 N28 N19 N43 S53 S53 S53 S14 N19 N34 N60	D- C- C- D- D- D- B- D- C+ D- C+ D- C+ D-	60 180 20 35 10 350 250 200 40 40 4755 10 3250 15	BNs s ANd BNs s BNs s ANd ANd ANd BNs s ANd ANd BNs s ANd	Streamers

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956	-	•	•	•••		
July 4	335-16 20-25 25-27 35-37 44-54 54-63 64-68 66-67 71-96 96-108 108-112 112-126 120-145 167-209 215-217 222-247 246-248 253-257 262-283 284-287 288-317 318-335	N86 N62 N52 N39 N29 N21 N11 S15 S30 S84 S36 S21 S12 N3 N18 N37 N57	D+ D- D- D- D- D- D- D- D- D- D- D- D- D-	4820 19150 1920 1930 1930 1930 1930 1930 1930 1930 193	BNs s AND ANM BNs AND BNs s ASA BSS AND AND AND BNS S AND	Streamers Streamers
July 5	0-2 23-29 32-36 40-55 60-66 66-68 71-72 94-113 125-145 129-201 215-219 222-234-245 254-266 271-272 295-297 303-319	N86 N63 N52 N126 N22 N17 S145 S15 S128 S128 S127 N122	D- C D- B- D D- B-+ D D C- D- D-	20 180 15 475 40 10 5330 150 25 160 5170	ANM AND BNs s AND AND AND AND ASS AND AND BNS s AND BNS s AND BNS s AND BNS AND BNS AND AND AND BNS AND AND BNS AND AND BNS AND	Very faint
July 6 (cont.)	334-18 19-30 40-52 61-79 69-71 83-84 90-98 100-112 114-118 120-125 128-129 133-141	N62 N44 N19 N6 S5 S17 S27 S33 S40 S47	D- C+ C C D D- D- D- C+	50 350 240 215 40 5 280 65 15 15 335	BNs s ANd ANd BSs BNs ANd? ASf,f ANm BNs s BSs? BSs?	Arching streamer or ANd?

Date	Spread	Lat, of Center of Intensity	Impor-	Area in pau	Class	Comments
1956		·		-		
July 6 (cont.)	141-142 144-147 156-157 165-208 203-244 216-220 236-238 256-278 284-285 305-329	853 856 866 854 850 832 89 N16	D- D- D- D- D- D- C-	10 60 40 75 40 60 20 50 280	ANM AS f ANM BNS " s BNS " s ANM ANM BNS ? s ANA	Streamer
July 7	1.9-34 26-30 38-42 41-44 47-55 57-58 63-79 86-88 90-104 106-114 118-123 134-149 218-227 237-239 255-278 284-289 301-303 307-309 311-316 327-334	N61 N62 N149 N140 N31 N3 S120 S140 S140 S140 S140 S140 S140 S140 S14	B	550 605 3550 10225 605 135 655 1055 1055 1055 1055 1065 1065 1065	ANC ANd ANd ANA ANA ANA ANA ANA ASA AST, f BSs s? ANM ANA ANA ANA ANA ANA ANA ANA ANA ANA	Partial arch
July 8	341-20 32-35 35-48 48-53 58-62 63-69 71-95 95-104 110-111 116-130 138-147 162-202 211-235 242-247 248-276 278-292 279-292 292-303 295-297 307-317	N86 N57 N49 N40 N31 N8 S7 S33 S58 S46 S25 S14 N14 N26 N14 N26 N41	DDBC DDCCDCBDBDBCDDCC	75 55 500 40 40 190 190 190 190 190 190 190 190 190 19	BNs s ASf ANd BSs ASa ANd	Small flare in loop- shaped surge Streamers Arching Streamers

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956			***			
July 9	359-360 22-23 29-34 37-49 49-51 58-60 69-70 72-74 86-94 97-105 109-111 118-136 142-147 181-182 211-216 219-240 276-279 289-298 313-320	N86 N60 N48 N41 N32 N21 N18 O S11 S25 S354 S58 S58 S58 S7 N21 N26 N45	D- D- D- D- D- D- D- D- D- D- D- D- D- D	10 150 150 435550 623 1570 150 150 150 150 150 150 150 150 150 15	BNS ANC ANC BSS ? ASS ASS ASS ANC ANC BSS ANC ANC BNS ANC ANC BNS ANC	
July 10	38-21 27-49 37-50 49-50 54-60 71-76-82 85-94 85-94 101-102 112-135 144-151 154-160 167-206 212-237 243-248 253-251 255-335	N86 N51 N52 N35 N13 N13 N13 N13 S11 S13 S66 S57 S66 S14 S11 S11 S11 S11 S11 S11 S11 S11 S11	0. 8 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	5070 5070 5070 5070 5070 5070 5070 5070	BNs s ANd BSs BSs ANd ANm BSS ASs BSS BNs s ASs BNs s ANd ANd ANd BNs s ANd ANd BNs s ANd ANd ANd AS1 BSs	Arch forming
July 11 (cont.)	336-25 30-48 48-70 72-74 75-99 100-115 101-113	N86 N53 N19 N5 S15 S12	D- B B D- C D-	65 750 600 35 210 40	BNs s ANd ANd ANa ANd BSs s	Arch
,/				• -		

ANm

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Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956	-	·				
July 14	337-22 30-42 47-59 52-61 65-71 99-106 108-111 123-138 137-144 145-148 167-169 170-200 206-216 219-229 232-241 248-257 266-270 296-299 305-323 326-332	N86 N59 N37 N37 N38 S350 S57741 S538 S538 S538 S538 S538 S538 S538 S538	D-+ C -+ D D D D D D D D D D D D D D D D D D	30 3250 3250 30 400 330 400 330 100 115 140 1140	BNs's ANd ANes BSs's BSs? ANd BSs ANd ANc ANc? BNs's ANd	
July 15	335-24 34-40 45-59 60-64 64-72 70-74 78-82 80-86 101-109 121-127 130-153 162-180 213-217 2232-245 248-279 294-305 307-316 328-335	N83 N56 N41 N31 N22 N21 N3 S31 S44 S58 S48 S320 N1 N38 N38	0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0	60 120 120 155 155 155 155 155 155 155 155 155 15	BNs ANd BNs SANd AND ASC AND	Streamer Poor seeing
July 16	337-26 29-36 37-49 42-45 45-53 70-74 76-86 114-140 153-201 205-219 224-233	N83 N61 N53 N50 N46 N22 N12 S29 S84 S64 S47	D- C+ D- D- C+ B- D- D-	65 20 325 30 25 60 320 410 35 30	BNs's BNs's ANd ANm ANd BSs ANd+ ANd BNs's BNs's	

Date	Spread	Lat. of Center of Intensity	Impor- tance	Area	(2) 0.00	Garren a safe
1956	•		AM100	in p.u.	. Class	Comments
July 16 (cont.)	247-248 269-276 279-287 288-297 292-297 307-312 331-336	826 82 N8 N16 N21 N35 N59	D- D D- D- D+ D	15 165 110 30 35 110 75	BMs And And BSs ASs Anc And	
July 17	32-54 53-62 73-82 90-96 111-117 122-130 203-238 239-245 250-252 256-260 262-264 275-278 284-291 295-316 332-336	N54 N33 N17 N1 S20 S29 S33 S61 S32 S23 S16 S11 N2 N13 N28 N60	B+ 	700 145 80 70 80 35 110 50 115 55 135 135 75	AND ASA? ANO AND AND AND AND ASA BSS? ASA? AND	Streamers Poor seeing all day
July 21	335-338 357-359 10-11 34-56 55-62 68-73 86-87 89-107 97-117 114-120 135-138 137-143 166-194 212-223 233-239 243-244 252-278 296-305 313-320	N60 N81 N83 N51 N37 N9 N1 S11 S40 S43 S49 S43 S40 S43 S40 S43	D- D- D- D- D- D- D- D- D- D- D- D- D- D	30 15 10 25 70 25 15 15 15 14 15 19 190 100	AND BNS,S BNS'S ASA AND BSS AND AND BSS AND BSS AND BNS'S AND BNS'S AND	or BSs?
July 22	338-27 27-68 55-60 72-74 86-105 105-118 106-113 118-123 136-145 155-206	N81 N52 N40 N24 N2 S12 S11 S23 S47 S81	D- D- D- C D+ D- C-	35 80 25 225 160 70 55 160	BNs s a BNs s a ANa ANM AND AND AND AND AND AND AND AND BNs s a BNs s a	

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956						
July 22 (cont.)	220-221 227-228 234-247 255-277 278-281 295-303 303-307 307-326 332-334	957 849 839 812 N3 N22 N28 N37 N57	D- D- C+ D- D	15 550 475 40 95 550 30	BNs BNs ANd ANd ANc ANd ANd ANd BNs SANm	
July 25	336-341 23-40 41-62 69-79 84-87 91-104 105-115 120-124 135-139 141-158 172-196 215-219 223-230 240-252 274-277 280-282 298-301 298-307 315-319 323-335	N61 N68 N48 N12 N2 S3 S38 S52 S52 S52 N3 N21 N39 N53	0+ 0	140 385 250 100 50 140 550 40 90 7250 130 170 80 170	ANd ANd BNs 8 ANd ASf 8 ANc ANm ANd BNs 8 ANc ANm ANd BNs 8 BNs 8 ANm ANd ANd ANd ANd ANd ANd ANd	Streamer
Aug. 3	334-4 36-39 48-82 83-86 85-93 87-94 92-95 95-101 106-107 112-118 121-122 126-130 140-155 183-187 222-226 231-250 256-258 265-270 276-281 287-289 319-330	N76 N64 N37 N17 N12 N11 N8 N4 S27 S27 S41 S27 S41 S13 S2 N7 N43	D- D- A-D- D- D- D+ B-D- D-D- D-D-D-D-D-D-D-D-D-D-D-D-D-D-D	5 90 850 10 65 500 500 100 25	BNs s ANM AND ASI ASI BSs s ASI AND BNS AND BNS AND AND AND AND AND AND AND AND AND AND	Ascending Poor seeing

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956						
Aug. 4	340-20 24-38 38-41 42-49 50-70 72-85 80-90 95-103 114-118 121-125 122-127 129-134 136-142 145-156 167-206 215-217 221-226 233-250 259-262 262-274 278-289	N78 N71 N63 N56 N126 N18 N2 S13 S21 S28 S37 S48 S59 S59 S34 S13	0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0- 0	75 40 100 100 120 120 100 100 100 100 100 10	BNs s BNs s ANM BNs s ANd ASa ANd+ ANd ANC ANC BNs s ANd ANd ANd ANd ANd	Streamers
Aug. 5	334-24 25-38 39-42 42-49 51-54 55-62 69-81 80-83 91-102 99-100 104-119 120-138 148-156 169-202 223-234 235-241 235-241 235-240 241-256 256-270 274-296 303-305	N78 N72 N62 N50 N43 N21 N6 N3 S50 S51 S54 S330 S7 N82		535150550 5351505000 5351505000 53505000 53505000 5350500 5350500 5350500 5350500 5350500 5350500 5350500 5350500 5350500 5350500 535050 53500 53500 53500 53500 53500 53500 53500 53500 53500 53500 5	BNs's BNs's ANM BNs's ANM ANM ASa ANM* BNs's ANG ANG BNs's	
Aug. 6 (cont.)	5-25 32-39 40-51 65-79 68-71 80-85 95-96 118-121	N83 N66 N57 N29 N32 N19 N7	D- D+ D+ D+ D	35 120 110 225 45 60 15 50	Bns s a And And Ana Ano Anb ?	Poor seeing

Date	Spread	Lat. of Center of Intensity	Impor-	Area	Class	Comments
1956	phresq	Inconstry	CSTICE	in pau.	01422	Commerce
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Aug. 6 (cont.)	127-130 130-139 149-157 190-196 217-225 219-220 235-245 243-257 266-278 283-297 306-308 315-321	S27 S33 S51 S61 S63 S43 S32 S11 N10 N25 N34	D D+ C D- D- C- B D- D-	65 100 10 15 160 150 155 155 155	ASI AND AND BNS S BNS S ANC AND AND BNS S AND AND AND AND AND AND AND	
Aug. 7	341-342 36-42 57-62 59-63 60-67 77-80 100-109 111-118 118-121 122-136 137-141 142-145 152-163 169-186 231-245 244-249 266-301 301-310 306-309 310-313 314-323	N58 N64 N438 N30 N30 N31 N317 S311 S57 S511 S57 S511 N25 N35 N35 N35 N35 N35	D-C D D C D C D C D C D C D C D C D C D	15 175 70 55 135 160 30 175 75 80 320 325 125 110 65 780	ANM ANd AS1 ANm* BSs AS1 ASa ANd ANM ANd ANM	
Aug. 8	337-27 35-45 50-60 68-75 75-84 93-96 106-117 123-145 154-159 164-200 222-225 232-247 255-290 292-302 326-328	N76 N62 N47 N32 N9 S8 S54 S54 S60 S46 S13 N44	0+ 00- 00- 00- 00- 00- 00- 00- 00- 00- 0	45 300 10 105 225 20 50 75 70 15 275 275 10	BNs s a ANd BNs s a Sa ANc BSs s s? ANd ANd BNs s a ANm ANd ANd ANd ANd ANd ANd ANd ANd	Streamers Streamers

			Lat, of				
!	Date	Spread	Center of Intensity	Impor-		. Class	Comments
	1956				-		
	Aug. 9	343-26 29-35 38-46 63-65 73-88 91-105 105-114 111-118 116-118 128-151 162-170 171-181 192-194 204-235 247-248 252-257 269-270 267-298 302-307 315-322	N77 N72 N62 N140 N15 S10 S10 S10 S10 S10 S10 S10 S10 S10 S10	00000++++++000000000000000000000000000	40 10 10 10 10 10 10 10 10 10 10 10 10 10	BNs's BNs's ANM ANM AND AND AND BSS AND AND BNS'S AND AND AND AND AND	Streamer
	Aug. 10	355-20 40-49 64-67 76-81 87-88 90-108 116-120 136-62 178-82 217-24 250-259 268-276 280-295 299-308 319-325	N34 N79 N60 N39 N16 N9 S14 S48 S76 S63 S13 N14 N19 N38	D	75 15 300 300 160 5 435 650 10 160 160 225 95	AND BNS'S ANM ANM ASf BNS AND AND BNS'S BNS'S AND	
	Aug. 11	333-340 342-24 41-47 50-58 63-71 76-82 92-100 102-104 113-134 145-158 158-166 224-233	N53 N75 N60 N50 N36 N2: N8 N1 S16 S47 S59 S55	D+ D- C D+ D+ D- C+ B- D+	150 50 10 550 575 120	ANd BNs 's ANm BNs 's ANd ANc BNs BNs ANd ANd ANd	

Date	Spread	Lat. of Center of Intensity	Impor-		Class	Comments
1956		•				
Aug. 11 (cont.)		831 823 85 N6 N13 N24 N43	D- D+ D C D C- D	40 125 90 300 120 165 80	ASa ANC ? ANC ASa ANC ANC	Streamers
Aug. 12	332-351 41-48 64-71 86-87 119-135 143-158 160-170 234-235 250-252 259-266 270-272 276-305 279-286 310-312 317-320 328-330	N54 N61 N39 N18 S24 S51 S51 S314 N3 N34 N34 N34	C D C D C B C D D D B C D D D	270 150 170 10 2850 180 10 20 190 5 105 350 40	AND	
Aug. 13	337-348 353-355 356-22 32-43 45-48 50-56 59-74 74-85 88-95 100-107 127-143 141-161 156-204 164-168 213-214 239-242 267-271 278-280 287-299 299-312 302-309 316-318 323-327	N57 N69 N81 N68 N59 N39 N20 N30 S44 S74 S56 S13 S70 N20 N21 N21 N21 N21	C+ D- D- D- D- C+ D- C+ B- D- D- C- D- C- D- C- D- C- D- C- D- D- C- D- D- D- D- D- D- D- D- D- D- D- D- D-	33000005050 30000050050 30000050 3000050 3000050 3000050	ANd ANc BNs's ANc BNs's ANd ANd ANd ANd ANd ANC BNs's ANc BNs's ANc BNs's ANc BNs's ANc BNs's ANc BNs's ANd BNs's ANd ANd ANd	Streamer Streamer Very faint

Date	Spread	Lat. of Center of Intensity	Impor-		. Class	Comments
1956						
Aug. 15	343-348 51-71 75-80 86-88 117-118 130-135 143-153 169-170 223-249 267-270 274-297 319-32	N60 N128 N19 S12 S41 S55 S64 S57 S17 S1	C C D D D D D D D D D D D D D D D D D D	190 300 85 80 15 100 130 15 80 80 250	ANM ANd ? ANc ? ANd ANd ANd BNS ANd ANd ANd	Poor seeing n n n n n n n n n n n n n n n n n n n
Aug. 16	344-351 45-52 58-72 75-82 118-120 127-134 187-188 208-217 225-245 248-250 252-254 262-263 277-278 284-295 297-319	N60 N57 N41 N27 S13 S25 S80 S72 S33 S33 S24 S9 N3	C+ D- BD D- BD DD	240 3555 650 140 100 100 100 100 100 100 100 100 10	ANM AND AND AND AND AND AND BNS,S AND BNS,S ANM BNS ANM AND AND AND AND AND	
Aug. 17	343-353 66-77 82-84 115-122 118-125 148-157 161-163 203-223 223-242 250-257 280-286 290-308 314-324	N61 N36 N24 S12 S46 S55 S53 S54 S54 N16 N32	C- C- D- D- B- B+ C- D+	325 255 20 90 85 15 850 900 115 130 145	ANd ANc: BNs ASa BSs s ANd ANm ANe ANd ANd ANd ANd ANd ANd	Streamers Streamers Poor seeing
Aug. 18	343-356 6-20 24-45 64-71 72-84 92-93 103-105 118-121 173-199 229-237 247-255	N62 N83 N72 N40 N30 N14 N3 S13 S78 S54 S34	C+ D- D- C D- D- D- C # D-	275 15 20 45 275 20 10 30 45 360 140	ANd BNs s BNs s ANd ANd BSs BNs ANd BNs ANd ANd BNs	

Date	Spread	Lat. of Center of Intensity	Impor- tance	Area in p.u.	Class	Comments
1956	•	•		•		
Aug. 18 (cont.)	258-260 268-270 281-296 298-310 311-329 330-342	S28 S18 S3 N16 N36 N49	D- D- C+ C+ C+	10 10 400 225 315 15	ANM ANM ANd ANd ANd BNs * s	
Aug. 22	335-337 345-351 58-70 74-81 86-104 110-123 119-124 142-145 145-161 195-200 218-251 234-238 239-253 266-267 272-297 301-309 309-315 315-323 325-331	N48 N60 N44 N31 N14 S5 S53 S53 S53 S17 S19 N125 N125 N125 N125 N125 N125 N126 N126 N126 N126 N126 N126 N126 N126	D-DD D-BD D D D D D D D D D D D D D D D	20 110 160 2500 110 5605550 1580 120 190 190 190 190	ANM AND BNs s AND AND BNs s AND ANM BNs s AND BNs s AND AND BS ASI AND BS AND B	Streamer Surge along loop
Aug. 23	338-22 347-353 36-53 53-73 76-82 90-117 120-133 137-149 152-161 219-227 238-244 246-247 253-261 263-270 288-307 307-313 309-316 319-326 327-337	N73 N58 N63 N63 N63 N63 N63 S40 S42 S48 S48 S48 S48 N63 N63 N63 N63 N63 N63 N63 N63 N63 N63	D- D- D- B	145 100 330 600 500 520 210 35 100 15 100 15 100 15 100 15 100 15 100 15 100 15 100 15 100 15 100 15 100 100	BNs s ANd ANd ASf, f ANd BNs s ANd BNs s ANd ANd BSs ANd ANd BSs ASf ANd	

Date	Spread	Lat. of Center of Intensity	Impor- tance	Area in p.u.	Class	Comments
1956						
Aug. 24	338-340 346-355 355-16 31-35 37-57 57-73 70-76 76-86 76-82 87-109 109-113 113-114 114-116 121-124 127-132 131-135 136-145 131-153 151-206 221-226 253-258 266-292 298-323 328-333	N50 N73 N751 N47 N30 N11 N30 N11 O S 46 S 42 S 53 S 53 S 53 S 53 N19 N19	D	40 50 50 50 50 50 50 50 50 50 5	ANA ANA BNS'S BNS'S AND AND ASC ASA BSS AND AND BNS'S AND	Arching streamers between ANd's
Aug. 25	332-333 345-353 353-24 76-79 78-83 81-86 83-89 90-97 91-94 107-112 114-123 124-126 128-137 130-132 144-157 157-159 164-231 252-265 261-269 263-273 273-315 320-322	N584 N766 N31972 N160 N180 N180 N180 N180 N180 N180 N180 N18	D-CD-AD-DD-DD-DD-DD-DD-DD-DD-DD-DD-DD-DD-DD	1550 550 550 550 550 550 550 550 550 550	ANA ANd BNs s ANd BNs ASA AS1? BSs AS1 ASA ANC? BSs's ASC BSs's ASC BSs's ASC BSs's ASC ASC BSS ANd BSS ANd BSS ANd BSS ANd BSS ANd ANd AND AND	Arching streamers or ANma?

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		Lat. of Center of	Impor-	Area		
Date	Spread	Intensity			Class	Comments
1956						
Aug. 26	345-355 32-66 68-70 78-85 82-86 85-92 86-89 95-104 96-104 100-104	N59 N58 N40 N29 N25 N20 N22 N10 N8 N7 S1	B A D D+- D D+- D+- D	475 1400 60 155 140 100 130 160 90 150 110	And Anc Asf Asa And* Asf Asi Bss, s	Poor seeing all day
	119-120 123-137 225-237 256-264 257-264 260-270 286-291 323-325	\$10 \$20 \$58 \$23 \$23 \$26 \$1 N35	D- B- C D D	20 120 425 200 100 95 35	ANC? ASa ANd BSs?s ASa ANd+ BNs?s ANm	Very faint
Aug. 27	343-355 36-60 66-72 68-70 82-90 82-84 100-110 115-117 123-128 137-161 228-241 261-266 266-270 311-313 313-325	N58 N60 N41 N28 N3 S6 S14 S39 S514 S22 N28	B- B+ DDDDC DDC BDC DDC	550 950 65 50 150 450 450 5750 60 100	AND AND ASI ASI BSS AND ANC ANC ANC AND	Poor seeing all day
Aug. 28	342-355 15-16 36-50 72-74 78-91 99-100 103-109 112-113 121-125 135-160 162-165 188-241 252-257 259-268 280-282 284-294 305-305	N56 N81 N64 N37 N11 N3 S13 S13 S555 S537 S538 S538 S538 S538 S538 S538 S538 S538	B	575 700 180 150 150 370 500 600 510 500 500 500 500 500 500 500 500 5	ANd BNs ANd AS1 BNs AND AND BNS, 8 BNS AND AS1 BSS BNS BNS BNS BNS BNS BNS BNS BNS BNS	Arch

Date	Spread	Lat. of Center of Intensity	Impor-		. Class	Comments
1956						
Aug. 29	334-0 3-27 29-34 36-52 61-80 86-90 89-91 97-99 103-114 115-122 139-143 143-148 149-151 155-165 173-175 176-207 225-245 248-260 257-289 298-299 304-308 309-317 323-328	N60 N79 N65 N65 N40 N20 N120 N120 N120 N135 S340 S346 S346 S346 S346 S32 S346 N160 N160 N160 N160 N160 N160 N160 N16	B D = B = C D = C D = C D D D D D D D D D D D D	750 20 10 500 500 25 20 10 375 90 10 10 15 10 190 70	ANd BNs*s ANd ANd BSs ASa ANm ANd ANd ANd BNs,s ANm ANd BNs,s ANd BNs*s ANd BSs ANd	Arch
Aug. 30	336-340 344-7 10-27 32-35 38-50 62-104 110-112 113-116 125-135 143-152 156-164 172-205 227-228 233-241 248-251 254-262 264-271 273-277 293-296 302-319 315-324 318-327	N48 N64 N82 N75 N30 S1 S135 S51 S518 S531 S531 S15 N50 N27 N33	D B D D D D D D D D	5 25 10 10 400 1750 355 55 135 55 120 80 145 260 145 260 140 130	BNs,s ANd BNs,s ANd ANd ANd BNs,s ANd BNs,s ANd BNs,s ANd BNs,s ANd BNs,s ANd BSs ANd BSs ANd BSs ANd BSs ANd	
Aug. 31	335-338 347-11 40-50 57-87 90-107	N46 N64 N65 N51 N7	D- C C+ A- B-	40 350 290 1150 485	BSs And And And Anb	treamers

Date	Spread		Impor-	_	Class	Comments
1956	-	•				
Aug. 31 (cont.)	116-117 135-140 150-153 168-198 260-262 266-269 274-279 297-325	S5 S26 S41 S63 S30 S24 S14 N19	D- D- D- D- D- C+	30 90 65 25 25 30 110 350	? ANd ANd BNs 's ANe ANd ANd	
Sept. 1	337-338 340-344 347-354 356-7 35-36 41-47 48-56 56-79 87-88 96-118 119-124 138-142 152-161 168-172 178-216 234-243 266-282 301-309 312-324 318-319 329-334	N429 N599 N65933 N45933 N45933 N1280 N45933 N1280 N45933 N1280 N45933	D- D- D- D- D- D- D- D- D- D- D- D- D- D	10 30 11 10 10 10 10 10 10 10 10 10 10 10 10	BNs ANd BNs BNs BNs ANM BNs ANd BNs AND BSs ANM ANC BNS AND AND ANC BNS AND AND ANC BNS AND AND ANC BNS AND AND ANC BNS AND AND ANC BNS AND ANC BNS AND AND ANC BNS AND AND ANC BNS AND	Arch Streamer
Sept. 2	334-335 341-348 351-24 44-49 59-68 86-91 93-110 111-114 116-137 120-124 137-147 158-161 162-197 228-232 234-241 246-258 274-276 294-315	N43 N53 N79 N64 N23 N9 S11 S11 S48 S60 S40 S140 S13	D	1560 1560 1550 1560 1560 1560 1560 1560	ANM AND BNS'S ANM AND BSS'S AND AND BSS? AND AND BSS? AND AND AND ANC ANC AND ANC AND	

Date	Spread	Lat. of Center of Intensity ^o	Impor- tance	Area in p.u.	Class	Comments
1956						
Sept. 3	336-348 356-15 24-28 45-49 61-70 74-78 83-84 84-93 96-108 112-122 126-135 130-133 144-151 161-163 209-210 227-228 232-235 235-241 246-258 274-280 283-284 290-326	N51 N78 N74 N47 N38 N123 N123 N123 N138 N23 N23 N23 N23 N23 N23 N23 N23 N23 N23	C D D C D D D D D D D D D D D D D D D D	275 10 75 25 10 50 10 50 10 10 10 10 10 10 10 10 10 10 10 10 10	ANd BNs's ANC ANm? ANd ANd ASa BSs's ANd AS1? ASa AS1 ANd ANm BNs BNs ANm ANC ANd ANd ANd ANd	Very faint
Sept. 4 14:43 14:52 U.T.	334-25 344-351 45-50 59-63 66-74 68-71 80-87 93-96 98-100 101-129 130-140 148-152 156-185 162-165 203-222 233-239 242-230 258-305 307-316 315-322	N67 N53 N512 N529 N13 N13 N13 N13 N13 N13 N18 N18 N18 N18 N18 N18 N18 N18 N18 N18	D DDDDDDBCDDDCDDCD+	5070 65005055500 50055055000 50050500050 135550500050 13555050	BNs s ANd ANd ASa BSs ANd? ANe ANd BSs s ANd BNs s ANd BNs s ANd BNs s ANd ANd ANd ANd ANd ANd ANd ANd	
Sept. 4 24:55 15:23 U. T. (cont.)	339-27 345-351 47-53 59-67 70-72 70-72	N69 N56 N61 N49 N41	D- D- D+ D	50 65 45 130 25	BNs's ANd ANd ANd ASf BSs	Omitted in the Analysis

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956					_	
Sept.4 (cont.) 14:55 15:23 U. T.	85-88 88-89 89-92 94-123 123-125 127-140 131-135 149-152 161-166 180-227 205-219 223-239 242-250 252-259 261-309 310-315 315-322	N25 N21 N3 S12 S20 S38 S58 S58 S58 S56 S46 S18 N20 N25	D	30 155 250 155 105 105 105 105 105 105 105 105 1	ANM BSs ASa ANd ASa BSs's AS1 ANM ANd BNs's BNs's ANd ANM ANd ANM ANd ANM AND	Omitted in the Analysis
Sept. 6	23-24 47-50 63-64 70-76 80-83 91-110 121-132 137-143 148-156 163-168 228-249 244-255 254-265 262-272 272-296	N83 N62 N49 N40 N31 N12 S13 S27 S39 S42 S38 S28 S23	D- D- D- D- D- D- D+ C+ D+ D+ D- D- D- D- D- D- D- D- D- D- D- D- D-	550 65550 105550 10593150 15050 15050	BNs ANm BNs ANe ANm ANd ASf,f AS1? BNs,s ANd ANd ANd ANd ANd ANd	Streamer Faint
Sept. 7	340-18 34-68 48-51 67-73 77-89 92-97 100-114 121-132 148-150 162-168 172-203 210-227 214-215 230-232 232-251 247-261	N66 N58 N62 N43 N31 N18 N1 S36 S52 S69 S68 S76 S55 S40	D- D- D+ D+ D- C+ D- D- D+ B C	25 30 45 140 35 10 35 10 35 10 35 10 15 120 25 120 25 25 25 25 25 25 25 25 25 25 25 25 25	BNs s a BNs s a ANM AND	Streamer Streamer Streamers

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956						
Sept. 7 (cont.)	254-262 262-272 282-298 297-303 303-307 307-313 307-317 318-323 324-330	S33 S25 S2 N6 N12 N16 N18 N29 N33	D C B- D D+ D+ C-	85 190 850 85 160 45 130 150	ASa ANd# ANd# ASa ANd# ASa BSs!s ASa? ANd#	or AS1?
Sept. 16	336-341 355-6 45-48 56-65 66-84 75-89 95-98 105-122 125-130 139-153 160-164 209-210 249-259 256-268 271-274 273-297 311-321	N44 N75 N67 N55 N39 N17 N1 S13 S48 S41 S32 S8 N1 N22	D + + + +	75 450 150 450 400 370 370 370 185 300 90 7150	ANd ANd BNs ANc ANd ANc ANd ANC ANd ANd ANd ANd ANd BNs ANd ASa BSs BSs S	Poor seeing n n n n n n
Sept. 17	333-342 358-10 13-21 56-86 86-87 92-93 106-133 144-158 160-170 209-216 234-240 254-274 270-274 270-274 274-200 301-317 333-337	N44 N69 N79 N46 N27 N22 S37 S52 S57 S59 S26 S16 N42		180 300 150 350 350 905 350 40 5450 7140 85	And And Bns s And Asa Bns And And And Bns s And	Streamer
Sept. 18	332-344 346-357 359-14 22-8 57-71 76-87 94-95	N[4] N57 N71 N51 N34 N20	C- D- C+ D- B C	150 15 275 45 650 215	And Bns ' s And Bns ' s And And Asa	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956						
Sept. 18 (cont.)	96-102 104-111 112-134 141-146 152-157 158-172 176-204 208-228 232-241 242-256 248-261 254-261 261-282 267-270 268-272 280-289	N15 N7 86 830 857 85 85 85 85 85 85 85 85 85 85 85 85 85	0-++	15 110 855 105 130 1470 1470 160 190	BNs s ANd ANd ASa ANm ANd BNs s BNs s ANd ANe ANe ANe ANd ASa ANd ASa ASI BSs ANd	
	294-311 325-331	N10 N35	C- D	380 40	ANC ANC	
	336-338 339-341 339-26 344-346 358-3 31-62 66-69 80-91 94-106 109-118 122-129 136-146 149-157 160-176 202-248 235-257 258-266 259-261 271-283 288-289 300-310 316-317 321-321 335-340	S31 S35 S17 S7 N8 N22 N30 N50	D+	150500 13505005000000550000 1350501231508000550000 13505010050000055000000550000000000	ANM ANO BNS'S ANM AND BNS'S ANM BNS'S AND AND AND BNS'S AND AND BNS'S AND BNS'S AND BNS'S AND BNS'S AND BNS'S AND BNS'S AND BNSS AND	
(cont.)	346~354 357 - 4 6-21 37 -5 9	N54 N74 N75 N64	D- D+ D- D-	20 100 40 15	BNs 1 s ANd BNs 1 s BNs 1 s	

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Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	. Class	Comments
1956						
Sept. 20 (cont.)	73-76 82-85 58-97 103-112 114-126 127-131 134-154 157-175 235-239 248-260 260-284 288-296 307-323	N41 N32 N9 S5 S15 S26 S51 S58 S42 S23 N16	D- D- D- D- C+ D- C+	50 150 90 700 50 45 405 405 50 425 405 50 628 50	Anc Bns 's And And Asl Bns 's And And And And	
Sept. 21	344-346 350-356 356-7 29-44-67 69-70 74-76 82-84 87-92 91-92 99-113 116-128 132-139 141-149 153-180 200-201 206-228 235-239 262-278 280-293 285-290	N50 N57 N74 N76 N56 N40 N32 N23 N9 S7 S31 S49 S58 S58 S88 S88	D	15 180 70 290 10 350 555 180 140 755 385 70	ANQ BNs s AND	
Sept. 22	350-353 356-6 8-28 30-37 40-70 77-85 90-98 102-117 118-126 128-141 131-135 144-148 156-180 180-200 202-232 234-239 256-270	N57 N74 N80 N79 N55 N34 N19 N5 S19 S17 S52 S78 S78 S28	D- CD- A- CD+ CDDDDB- C+	15 215 20 1250 160 90 450 80 160 90 150 25 160 275	BNs s ANd BNs s BNs s ANd ANd ANd ANd ANd ANd BSs, s ANd BNs s BNs s ANd BNs s ANd ANd	Arch, streamers

Date Spr		of er of Impo naity tand		Class	Comments
1956					
285 297 303 311	-282 s: -294 s: -300 ni -320 ni -317 ni		45	And And Ast Ast? Ast? Asa Bss And	
36 79 92 122 163 192 226 250 254 271 278 288 302	-5 Ni -22 Ni -67 Ni -88 Ni -111 Ni -147 Si -174 Si -235 Si -235 Si -252 Si -262 Si -262 Si -276 Si -286 Si -306 Ni -326 Ni	54 D- 60 C- 62 A 32 D 13 B- 54 B- 63 D- 63 D- 64 D- 65 D- 66	170 10 1800 85 650 500 425 100 275 120 90 85 90 85 90 85 80 225	BNs ANd ANd ANd ANd ANd BNs ANm ANm ANd BSs ANc ANc ANd BSs ANc ANd	Arching streamers Streamers Streamers Streamers
24 72 79 96 125 143 167 186 202 229 255 268 270 273 304	-2 N -43 N -66 N -76 N -85 N -106 N -134 S -177 S -187 S -215 S -231 S -231 S -264 S -269 S -272 S	60 D- 60 C- 81 D- 62 A- 41 D- 32 D- 13 D- 14 D- 57 D- 64 D- 64 D- 27 D- 15 D- 17 D- 29 C-	175 25 3300 10 25 200 70 260 15 60 75 15 750 10	BNs s ANd BNs s ANd BNs,s ANd	or ANC?
340 352	-336 N -342 N 2-358 N	39 D 38 D 45 D- 59 C	235	ASa ANd# ASI ANd	
(cont.) 358	- 	80 D-	35	BNs 's	

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Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956						
Sept. 26 (cont.)	50-62 67-87 88-95 98-107 111-122 125-141 144-148 157-161 169-176 179-180 214-231 233-239 246-261 260-287	n80 n59 n40 n23 n12 s12 s30 s42 s64 s642 s21	D-+ BC D-+ CD DD DD D DD DD DC-	25 400 770 215 60 170 210 50 40 80 5 120 15 325	BNs s ANd ANd ANd ANd ANd ANd ANd ANd BNs BNs s ANm BNs s ANm	Streamer Streamer
	299-301 311-314 316-327 321-327 328-329	N5 N16 N28 N28 N33	D- D C D+ D-	10 50 190 115 20	Anc Anm Asf And# Bss?	
	333-338 345-2 25-32 53-64 68-90 90-101 102-110 120-133 140-142 143-152 154-165 167-196 207-216 223-232 232-241 262-269 273-284 312-313 321-332 322-329	N40 N58 N58 N39 N21 N10 S11 S31 S65 S68 S58 S58 S16 N17 N31 N32	D- C D- C A-+ DD- DD- DD- C D- C DD- C DD- DD- DD- DD- DD- DD- DD- DD- DD- DD-	20 240 15 20 1450 375 90 150 20 150 20 155 20 125 30 20 20 20 20 20 20 20 20 20 20 20 20 20	BNs s a And BNs s a And And And And BNs s a BNs s a BNs s a And Asa And BNs a And Asa And BNs a Sa Asa Asa Asa Asa Asa Asa Asa	Arching streamer from ANd to AND
Sept. 26	339-358 6-27 25-48 48-55 67-90 90-100 103-107 110-117 121-124 125-129 131-147	N51 N76 N79 N64 N37 N21 N10 N3 S7 S10 S21	B- D- D A B D- D D C-	450 15 35 85 1650 75 10 40 30	ANd BNs s BNs s ANd ANd ANd BNs,s ANn? ANm	Streamers

	Date	Spread	Lat, of Center of Intensity	Impor- tance	Area in p.u.	Class	Comments
	1956						
And the same same	Sept. 28 (cont.)	151-154 199-200 230-243 252-253 258-264 267-269 275-285 297-300 305-309 312-315 313-335 320-322	836 881 858 844 834 828 814 N2 N11 N17 N29 N25	D-+ C-+ D D D C	65 575 120 155 100 200 40	ANM BNS ANd BNS BSS,S ASA ? ANd SNS!S ANd ASA BSS	
	Sept. 29	31-32 54-57 63-90 90-102 115-120 127-138 137-142 143-149 154-158 204-220 237-244 250-269 292-297 305-311 314-316 317-336	N51 N82 N60 N38 N20 S1 S24 S30 S40 S81 S55 S36 S2 N12 N19 N29	B- D- D- D- D- D- D- D- D- D- D- D- D-	575 15 1000 800 50 100 30 40 60 150 150 150 110	AND AND AND AND AND AND AND AND AND AND	Streemer
	Sept. 30	340-352 356-26 32-60 65-72 96-113 134-149 137-143 162-164 171-181 240-267 275-286 291-301 303-307 311-313 314-329	N52 N73 N70 N49 X12 S23 S47 S59 S41 S1 N9 N16 N21	C D- D- D+ C- D D- B+ C- C-	250 15 50 100 160 215 90 25 350 40 20 325	ANC BNs's ANd ANd ASa BSs ANm BNs's ANd ANd ANd ANd ANd ANd ANd	Streamer
•	Oct. 1 (cont.)	349-354 45-55 66-74 85-87 108-110 123-126	N56 N65 N47 N30 N7 S8	D D+ D+ D- D-	15 35	ANC ASC AND ANM ANM	

Date	Spread	Lat. of Center of Intensity ⁰	Impor- tance	Area in p.u.	Class	Comments
1956						
Oct. 1 (cont.)	134-140 152-154 188-189 200-201 220-226 247-261 266-278 280-287 291-306 315-317 319-323 326-332	821 837 871 882 872 843 822 812 N2 N20 N24 N33	0	100 40 5 60 400 100 525 40 120	And Ann Ens Ens Ana And And And And Ess Asf Ess, s	Poor seeing n n n n n n n n n n
Oct. 2	335-338 347-348 356-358 49-53 65-67 108-114 125-132 139-141 149-152 153-161 165-168 217-218 223-230 276-290 299-306 331-333	N41 N60 N64 N50 N5 S13 S24 S35 S40 S51 S68 S16 N7	D	40 15 20 10 50 10 50 10 50 700 90 20	ANM BNs ? ANd ? ANd ANd BNs ANd ANd ANd ANd	Poor seeing all day Omitted in the Analysis
Oct. 3	337-342 346-352 29-34 44-48 49-60 60-68 71-73 82-89 90-95 100-110 125-131 132-147 150-158 163-170 174-200 200-230 245-248 269-275 277-284 269-275 277-284 285-297 301-318 324-327	N43 N531 N691 N612 N612 N612 N612 N613 N612 N613 N613 N613 N613 N613 N613 N613 N613		105 105 105 105 105 105 105 105 105 105	ANC AND BNS S AND ANC BNS S AND AND AND AND AND AND AND BNS S AND	

		Lat. of Center of	Impor-	Area		
Date	Spread	Intensity	tance	in p.u.	Class	Comments
1956						
Oct. 4	342-344 350-355 356-25 27-41 45-50 55-66 71-74 87-103 115-120 121-143 160-167 180-208 282-235 246-256 263-268 263-268 275-276 275-286 275-286 275-300 303-316 324-339	N\$60 N\$60 N\$65 N\$19 N\$19 N\$147 N\$120 S\$120 S\$120 N\$11 N\$11 N\$11 N\$121		354286473416053000 64734160530000 6459000 6459000 6459000 6459000 6459000	ANC AND AND AND AND AND AND AND AND	
Oct. 5	333-339 344-355 42-31 42-52 55-62 78-80 85-88 90-99 101-114 152-158 160-162 164-165 168-229 232-238 247-264 264-286 274-286 274-286	s26 s22 s18		100 110 155 10 10 15 170 10 170 10 10 10 10 10 10 10 10 10 10 10 10 10	ASA AND BNS S BNS BNS BNS AND AND AND AND BNS BNS AND BNS BNS AND BNS BNS AND BNS	

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		Lat. of Center of	Impor-	Area		
Date	Spread		tance	in p.u.	Class	Comments
1956						
Oct. (cont.)	294-303 298-309 301-313 315-322 322-329	n29 n6 n9 n3	C- D D+ C+ D+	175 60 250 270 100	ASI BSs s ASa BSs ANd#	
Oct. 7	334-340 343-354 24-45 48-55 58-68 70-80 82-88 90-98 100-110 113-116 121-123 129-147 130-149 171-175 176-205 221-223 228-229 233-249 261-268 268-282 287-292 318-328	N41 N550 N544 N41 N234 N2 S21 N25 S573 S577 S5304 S715 N125	DCDDDCDCDDDDDDCDCDCDDD	50 50 50 50 50 50 50 50 50 50 50 50 50 5	ANd BNs s ANM BNs s ANd ANd ANM BSs BSs s ASa ANd BNs s ANM BNs and ANM BNs ANM BNs ANM BNs ANM BNs ANM BNs ANM	Streamers
Oct. 8	335-342 350-358 25-43 49-58 65-78-83 78-85-96 112-115 135-138 167-168 169-174 180-206 233-251 264-286 294-301 302-316 328-331	N43 N55 N60 N49 N36 N35 N22 N20 S51 S51 S51 S51 N10 N10 N34	DD	9542180 130550 130550 1305550 1305550 1305	ANd ANd ANd ASA BSS ASI BNS BNS BNS ANd BNS ANd ANd ANd ANd ANd ANd ANd ANd	Arch of funnel and partial loops
Oct. 9	343-348 357-20 21-43 51-55 59-64	n49 n69 n61 n55	D D- D- D+ D-	65 15 10 135	And Bns 8 s Bns 8 s Anm Bns 8 s	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
	op. ou.	100000-0				
1956			. .		4 37.3	
Oct. 9 (cont.)	69-83 90-93 91-94 96-97 115-137 120-127 132-137 164-166 171-176 177-178 207-226 231-240 255-263 267-292 296-299 307-311	N40 N25 N24 N19 S11 S7 S49 S57 S60 S60 S60 S26 N130	C+ D- D- C- D- D- D- D- D- D- D- D- D- D-	350 40 5 185 185 105 105 105 100 100	ANd BSs ASa BNs ANd+ AS1 ASa BNs ANd BNs ANd BNs ANd BNs ANd BNs ANd ANc ANd ANc ANd ANc	Streamers
	325-326 332-334	N30 N37	D-	20	ASa?	
Oct. 10	339-344 346-349 27-47 52-56 57-63 65-71 73-82 88-93 94-97 120-129 131-137 150-155 160-165 172-177 197-198 214-231 235-244 251-259 266-272 289-33	N451 N77 N61 N56 N56 N35 N35 N35 N35 N35 N35 N35 N35 N35 N35		10 70 3110 15 170 150 150 150 170 180 180 180 180 180 180 180 180 180 18	BNs s ANC BNs s AND BNs s AND AND BNs s BNs s BNs s AND BNs s	
Oct. 11	336-352 30-40 47-57 67-76 77-84 100-111 135-136 143-145 162-175 224-225	N80 N64 N45 N38 N10 S20 S28 S52	D- D- D- D- D- D-	15 20 65 940 155 155 5	BNs s s BNs s ANd ANd ASA BNs s AS1 BNs s BNs s BNs s	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956	-	•		233 • • • • •		
Oct. 11 (cont.)	248-255 264-267 273-275 275-283 305-306 309-315 324-332	\$45 \$30 \$22 \$17 N10 N15 N33	C D- D- D- D+ D	200 25 40 85 100 65	Anc BS3,8 AS1 AS2 BNS ANC AND	t ka kan
Oct. 13	350-356 359-21 22-51 52-59 61-70 97-102 104-110 111-125 127-136 139-152 167-173 173-177 178-197 204-231 234-250 250-253 252-260 254-262 262-274 263-283 306-314 315-317 317-324 328-334	N57 N79 N61 N517 N9 0 S16 S59 S68 S541 S37 S27 N120 N26 N35	DDC DDC DB DC DB C DDC CDD CC DDC CDD CC DDC CDD CC DDC CDD CC DDC CC DC CC DDC	95 25 30 20 10 45 40 40 52 10 20 20 160 70 160 75 120 150	ANM BNs s BNs s ANd BNs s ANd BNs s ANd BNs s ANc ANc BNs s ANc ANc BNs s BNs s BNs s ANd AS1 AS1 AS1 AS2 ANd BSS s ANd ASA BSS s ANd ASA BSS ANd ASA BSS ANd ASA	Arch Streamer Streamer
Oct. 14 (cont.)	334-343 346-351 352-355 21-40 51-63 66-69 31-33 101-102 114-122 117-119 141-148 147-156 159-177 191-206 221-233 239-265 266-280 269-281	N43 N527 N60 N493 N60 N433 N25 N11 S283540 S383 S4832 S4832 S5838 S5838	C D D C D D C D B C D D B C D	250 150 150 10 1550 1550 1550 1550 1550	AND BNS S ANM BNS S AND BNS S BNS S AND AND AND BNS S BNS S AND AND AND BNS S BNS S BNS S AND AND BNS S BNS	Streamer

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956	•					
Oct. 14 (cont.)	287-289 294-300 302-305 307-311 312-324	88 0 N7 N14 N25	D- D+ D- C-	50 100 45 20 175	ANe ANm BSs ASa ANc#	Streamer
Oct. 15	337-343 344-26 352-356 33-49 52-66 70-77 77-86 87-103 91-99 110-124 127-132 137-140 146-151 148-178 192-194 225-237 238-261 263-286 264-280 295-310 309-311 312-321 321-336	N47 N659 N744 N58 N314 N24 N24 N18 S31 S31 S44 N18 N18 N18 N18	CDDCCDQCCCDDCCCDDCCCDDC+	270 500 150 110 130 65 750 165 210 210 250 250 250 250 250 250 250 250 250 25	ANd BNS S ANM BNS S AND AND BSS S ASA BSS S AND	
Oct. 16	328-344 345-351 352-357 0-23 25-56 64-79 85-88 98-99 107-123 128-131 149-151 149-177 201-202 204-227 233-249 251-268 261-272 278-281 298-322	N52 N59 N73 N82 N43 N18 S1 S13 S13 S80 S80 S55 S31 S31 S15	C D D D C D D C D D C D D C D D C C D D C C D D D D C C D D D C D D C D D D C D D C D D D C D D D C D D D C D D D C D D D C D D D C D D D C D D D C D D D C D D D D C D D D C D D D C D D D C D D D D C D D D D C D D D D C D D D D C D D D D C D D D D D C D D D D C D D D D D C D	320 15 90 35 10 35 10 35 15 15 15 15 15 15 15 15 15 15 15 15 16 16 16 16 16 16 16 16 16 16 16 16 16	And Bns s And Bns s And And And And And And Bns Bns s And Bns And	
Oct. 17	352-2 4-21 49-56	N52 N60 N73 N64 N50	D- C D- D-	10 2 75 30 45 50	BNs s ANd BNs s ANd ASa?	

Date	Spread	Lat. of Center of Intensity	Impor-	Area in p.	Glass	Comments
1956						
Oct. 17 (cont.)	72-74 93-99 105-129 130-137 145-147 156-175 188-189 236-239 244-245 273-276 273-278 279-281 300-316 316-319 324-325 329-337	N43 N19 0 818 830 854 873 851 835 821 816 813 N21 N28	D B D D - D - D - D - D - D - D - D - D	15 650 110 25 10 15 25 240 175 25 240	BSs BSs ANd# BSs BSs ANd BNs ANM BNs ANM BNs ANd# ASs BNs,s ANd# ASl BNs ANd	
Oct. 19	335-341 356-359 15-16 53-65 65-66 66-72 74-78 78-81 83-87 95-97 98-105 109-126 124-131 133-148 162-164 195-207 220-221 229-241 251-255 273-289 280-287 313-324	N40 N61 N78 N57 N417 N36 N36 N30 N16 S32 S47 S58 S58 S15 N18	D	50 15 250 10 75 15 160 160 160 160 160 160 160 160 160 160	ANC AND BNS AND BNS AND AND AND AND BNS BNS BNS AND AND BNS	
Oct. 23	354-0 11-23 28-29 45-68 80-84 92-99 118-123 130-144 148-160 165-173 174-193	\$21 836 854 885	D- C- D- B- D- D- D+ D-	10 145 10 525 20 30 65 175 265 15	BNs ANd BNs SANd ANM BS SANG AND BNS SAND AND BNS SANM BNS SANM	

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956						
Oct. 23 (cont.)	240-242 255-256 262-274 275-290 301-306 304-310 305-306 316-323	855 840 827 814 N8 N11 N9 N23	D- D- C B D- D- C-	10 5 265 650 40 115 20	BNs BNs ANd ANd AS1 ASa BSs ANd	Streamer Streamers
Oct. 24	337-340 353-2 50-65 70-80 133-135 147-149 166-173 233-235 266-272 276-281 284-287 291-297 301-311 322 326	N43 N60 N60 N41 S18 S32 S54 S62 S27 S17 S11 N10 N17	D- C+ B- D- D- C D- D- D- D- D- D-	40 340 550 45 40 15 250 50 90 30 70 90 120	AND AND AND AND AND AND AND ASC AND AND AND AND AND AND AND AND	Poor seeing all day Arch Streamer
Oct. 25	337-346 352-2 10-24 42-65 66-71 73-96 99-104 122-126 130-143 134-136 165-177 193-199 233-243 261-273 281-286 295-307 325-329	N45 N60 N77 N61 N48 N32 N14 S8 S19 S56 S79 S59 S12 N4 N30	0-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B-B	30 425 35 750 165 160 170 90 1235 10 80 40	BNs's ANd BNs's ANd BNs's ANd* ASa BSs ASa BSs ANd BNs's ANd BNs's ANd BNs's	Ascending
Oct. 27	326-331 342-343 349-0 358-11 54-59 68-79 82-100 83-94 100-105 108-115	N33 N48 N58 N76 N59 N41 N25 N26 N12	D D-B C+CD+	90	ANC BNS AND AND AND AND ASA BSS'S ANC#	Streamers

1956						
Oct. 27 (cont.)	124-129 132-137 139-142 142-147 142-154 170-204 176-178 225-230 231-244 250-259 259-269 287-294 310-327	S11 S20 S25 S30 S36 S66 S61 S66 S59 S40 S33 S5	0	655 455 100 245 80 132 30 250 80	And BSs s ASI BSs Anco Bns s Anm And Bns s And Bns s And Asi	Streamer
Oct. 28	340-343 355-357 13-24 39-43 42-47 66-76 90-94 100-116 123-126 126-135 144-173 181-193 231-249 254-263 277-278 285-292 310-312 312-327	N47 N61 N71 N73 N69 N44 N23 N7 S10 S14 S61 S61 S36 S17 S8 N16 N27	0	10 155 10 3570 5025 4500 1520 1500 1500 1500 1500 1500 1500 1	BNs,s ANM BNs,s BNs,s ANd ANd ANM ANd	Streamer
Nov. 4	21-22 39-44 48-51 76-90 90-98 100-101 117-126 124-134 134-136 135-139 139-145 212-214 224-231 256-262 259-267 269-296 300-305 313-331	N56 N65 N65 N65 N65 N65 N65 N65 N65 N65	D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-D-	55 10 80 30 155 10 135 10 10 10 10 10 10 10 10 10 10 10 10 10	And Bns And* Bss And And Ass Bss Asl And* Anm Anc And Bss Asl And Bss And	Streamers

Date	Spread	Center of Intensity	Impor-	Area in p.u.	Class	Comments
1956						
Nov. 5	346-351 5-14 21-31 40-47 79-94 98-101 103-106 111-134 162-165 169-171 179-180 215-226 227-229 246-249 260-264 263-274 280-287 298-300 317-324 327-335	N55 N74 N85 N71 N14 N10 S6 S566 S74 S366 S366 S10 N27 N37	D+ D- C- C+ D- B D- D- D- D- D- D- D- C-	120 5 15 160 330 20 25 650 10 15 10 20 70 15 240 200	ANd BNs s ANd ANd BSs ANd BNs,s ANd BNs,s ANm BNs BNs s ANm ANm ANd ANd ANd ANd	Arch
Nov. 8	340-357 29-39 45-49 60-66 79-87 97-101 122-143 146-148 167-172 228-233 241-251 267-276 279-280 295-296 303-319	N51 N78 N66 N50 N30 N14 S17 S34 S56 S62 S49 S22 S13 N13	B	450 10 140 90 15 85 15 1320 325 190 10 15	AND BNS, S ANM AND BNS'S ANM AND	
Nov. 9	341-356 0-24 29-37 38-51 58-65 72-82 78-88 89-108 117-131 118-131 138-139 143-145 145-156 166-174	S11 S11 S25 S31 S37 S57	B+ D- D+ D+ D+ D+ D- D- C-	850 20 10 135 75 115 200 400 85 130 20 15 170	And BNs s BNs s And And And A Asa And A Asa Bss s Asc ? Bss ? Bns s And	Ascending

Date	Spread	Lat. of Center of Intensity ^o	Impor-	Area in p.u.	Class	Comments
1956		•				
Nov. 9 (cont.)	220-224 228-235 239-249 252-263 264-266 271-275 282-292 304-306 306-324 325-331	571 561 548 537 528 520 52 N12 N22 N34	D- C+ C- C D- D- D	15 280 175 240 30 25 100 60 300 160	BNs,s And And And BSs And And BSs And	
Nov. 10	336-24 341-345 28-39 41-56 60-66 71-80 81-82 85-94 102-113 120-127 123-125 134-141 144-151 144-151 166-165 167-175 176-208 226-235 251-273 284-297 306-316 322-332	N68 N50 N77 N65 N50 N32 N32 N31 N31 S11 S21 S29 S33 S49 S33 S49 S33 S49 S42 S42 N120 N34	D- D- D- D- D- D- D- D- D- D- D- D- D- D	65 125 10 170 65 20 160 1475 120 80 75 160 215 85 85	BNs s ANd BNs s ANd	Incipient surge?
Nov. 11 (cont.)	339-347 350-25 30-45 46-55 61-70 75-78 77-88 95-96 101-102 108-113 125-127 141-159 168-173 173-182 186-201 201-225 225-239	N50 N72 N75 N62 N46 N36 N31 N18 N12 N3 S57 S66 S77 S64	C D- D- C D+ D- D- D- D- D- D-	285 40 20 210 130 20 100 20 15 40 15 450 70 20 150	ANd BNs s BNs s ANd ANd ASa ANd ASa BNs ANd ASa BNs BNs ANd S ANd ANd ANd	Streamer

		Lat. of Center of	Impor-	Area		
Date	Spread	Intensity			Class	Comments
1956						
Nov. 11 (cont.)	244-249 249-258 254-264 285-289 290-297 302-307 307-312 312-318 322-326	848 840 833 86 0 N12 N17 N20 N31	D C+ D C- C- D+ D	100 300 90 15 180 15 140 115 45	And And Bns's And Bns's And Bns's And	
Nov. 14	343-351 352-24 40-41 44-53 64-74 80-86 92-94 96-98 97-102 111-125 126-142 151-174 186-201 220-268 268-280 279-301 286-290 325-327	N55 N73 N70 N65 N44 N30 N15 N15 S32 S48 S79 S29 S18 S9 S14 N34		135 30 857 450 100 800 405 155 100 800 800 800 800 800 800 800 800 800	ANd BNs s BNs ANd BSs s ASa ANd s ANd BNs s ANd ANd BNs s ANd ANd ANd	Ascending Poor seeing """ """ """ """ """
Nov. 15	344-357 4-7 31-32 35-40 44-50 66-72 79-86 98-135 139-145 139-145 230-235 253-261 265-270 267-277 273-293 303-336	83 330 348 860 835 824 920 38 N12	D* D* D* D D D D D D D D D D D D D D D D	130 55 55 95 10 10 10 10 10 10 10 10 10 10	ANd BNs s ANa ANm ANd ANd ANd ANd ANd BNs,s ANd ANd ANd BNs,s ANd BSs ANd BSs ANd BSs ANd	Streamers
Nov. 16	340-26 348-354 27-47 48-51 53-65	n68 n60 n73 n62 n51	Д. С= D- П	2 5 18 0 4 5 50 1 5	BNs s ANM BNs s ANC BNs s	

Date	Spread	Lat. of Center of Intensity	Impor- tance	Area in p.u.	Class	Comments
1956						
Nov. 16 (cont.)	67-69 78-90 95-104 111-116 117-120 124-133 133-141 150-167 174-203 211-214 226-232 239-247 251-260 261-263 270-291 305-314 319-325	N43 N28 N14 S8 S17 S27 S47 S69 S62 S48 S329 S18 S130	D- D- D- D+ B- D- D- D- D- D- D-	40 20 90 80 20 110 575 35 10 125 75 90 30 575 20	ANC	
Na∵. 21	350-351 353-357 14-20 46-66 75-90 90-96 117-118 122-125 127-137 133-137 137-142 177-178 218-232 259-274 276-286 287-305 310-316 319-335	N61 N64 N86 N60 N26 N18 S7 S13 S20 S25 S30 S67 S64 S22 S11 N6	D- D- B- D- D- D- D- D- D- C- D- C- C- C- C- C- C- C- C- C- C- C- C- C-	545 700 1315 700 1315 488 2500 100 2430 280 60 37	BNs ANC BNs AND AND AS1 BNS BSS? ASC AND BSS? BNS AND AND AND BSS AND AND BSS AND AND	or ANc#?
Nov. 214	340-343 357-2 24-25 55-70 70-92 86-88 92-107 128-131 134-149 174-178 214-219 224-269 289-290 315-325	N53 N70 N84 N51 N30 N22 N7 S21 S32 S66 S73 S48 O	D- D- C+ C D C D C A D D	65 155 285 260 90 270 75 270 50 1450 25 60	ANM AND AND BSS AND BSS AND BSS AND AND AND AND AND	or ASa

		Lat. of Center of Intensity	Impor-	Area		
Date	Spread	Intensity	tance	in p.u.	Class	Comments
1956						
Nov. 25	335-340 344-348 0-6 8-21 50-61 66-82 73-87 88-93 100-115 114-124 135-151 156-157 163-202 169-173 232-238 243-270 288-294 311-318	N49 N58 N86 N524 N28 N17 N2 N17 N2 S348 S528 S27 N27	D D- C D- C - C - C - D D + A D- D-	60 40 280 25 200 300 140 190 175 370 20 25 80 125 15 15	AND BNs's AND BNs's AND AND BSS AND	Streamers Streamers
Dec. 13	328-341 346-348 62-78 82-90 95-98 98-99 100-135 133-135 128-145 154-163 168-172 225-237 266-272 282-294 306-310 314-319	N58 N66 N31 N17 N5 N2 S20 S33 S58 S69 S48 S12 N8	D+ C+ C+ D D D+ D C D C+ D D D	170 1525 785 785 785 70 450 450 450 140 915	AND AND AND AND ASI BSS AND ASA BSS'S AND	Streamers
Dec. 14 a.m.	334-340 356-2 10-18 39-45 51-71 P.A. 900	N47 N77 N87 N61 N56				or ANm?
		Omitted	in the	Analysis		
Dec. 14 p.m. (cont.)	335-339 353-2 39-42 57-71 73-79 84-87 92-104 107-116	N56 N76 N61 N36 N24 N16 N7 S10	D- C D B C D- B-	35 190 40 675 220 10 400	Anm And Anm And And Bns, s Asa? And	or BSs?

Date	Spread	Lat. of Center of Intensity ^o	Impor- tance	Area in p.u.	Class	Comments
1956						
Dec. 14 p.m. (cont.)	120-135 133-138 140-151 157-160 169-170 225-237 241-256 264-274 270-278 278-293 297-299 299-301 305-314 315-318	826 835 846 858 869 850 832 812 88 N17 N19 N29 N36	C+ D+ D- B- C+ D- C+ D-	470 80 130 555 550 70 170 350 50 120 70	ANd+ BSs,s ANd ANm BNs ANd ANd ANd ANe ASa? ANd ANC+ ASC ASS	
Dec. 15	346-357 38-45 52-67 73-74 79-85 103-108 120-127 127-134 128-136 142-149 157-158 175-176 202-203 225-233 241-245 273-284 273-284 297-316 301-311	N70 N59 N47 N18 S29 S46 S78 S48 S78 S49 S41 S27	C+ C B+ D D C+ C D C D D D B D D D D D D D D D D D D D	325 200 1050 5 60 85 320 290 70 180 10 20 15 350 20 170 165 235 60	AND	
Dec. 16	334-343 344-355 356-9 24-39 39-45 47-49 52-65 68-73 78-82 86-87 92-112 115-125 117-139 127-135 135-149	822 8 32 830 844	D+ C+ D- C D- B- D- B- D- B- D- B- D- B- D- D- B- D- D- D- D- D- D- D- D- D- D- D- D- D-	20 420 10 25 240 10 1000 35 70 5 600 480 250 65	BNs s ANd BNs s ANd BSs s ANd BANd ANd ANd ANd ANd ANd ANd ANd ANd ANd	*

			Lat. of Center of	Impor-	Area		
Date		Spread	Intensity ⁰	tance	in p.u.	Class	Comments
1956							
Dec. 1	16	180-202 226-242 257-260 264-278 268-285 273-285 272-284 295-307 315-322	\$89 \$50 \$22 \$10 \$6 \$3 0 N20 N39	D- B- D- C- D+ C+ D-	10 350 15 250 60 115 525 25	BNs 's ANd BNs 's ASa BSs 's ANd ASI BNs 's ANd	
Dec	17	342-356 15-45 75-79 81-97 90-98 118-122 123-127 128-137 139-149 154-185 225-231 238-247 263-272 272-285 298-304 311-322	N71 N64 N21 N11 N5 S21 S26 S31 S43 S66 S52 S37 S11 S6 N1 N23 N39	C+ + + + + + + + -	550 500 500 500 500 500 500 500	And Bns s Bss And and Bss Asl And Bns s Anm Bns s Asl Bss Asl Asl Bns a	Part ascended
Dec.	20	348-350 52-56 74-80 82-91 84-91 93-100 93-99 118-122 124-125 160-161 209-228 252-273 277-292 300-325	N71 N44 N22 N12 N11 N2 S26 S63 S61 S18 N5 N34	D D+ C C - D+ D - C B D+ D-	40 150 215 235 165 115 60 20 15 230 255 45	Anm And And Asi Bss Asa Bss? Asi Bss And And And And Bns s	Poor seeing all day Streamer
Dec.		335-339 346-349 22-26 51-58 74-85 85-93 96-98 98-105 108-118	N59 N70 N74 N45 N19 N10 N1 S2 S14	D- D- C- C+ D+ D C	50 20 10 160 250 125 50 175 160	ANM ANM BNs,s ANC ANd ASa BSP BSs ANd	

Date	Spread	Lat. of Center of Intensity	Impor- tance	Area in p.u.	Class	Comments
1956						
Dec. 21 (cont.)	121-124 129-134 143-148 157-161 215-223 248-272 287-290 301-309	S25 S33 S49 S61 S59 S16 N10 N28 N38	D- D- D- D B D- D-	20 50 35 20 65 1100 35 20	BNs,s ANd ANd ANd ANd ANd BNs's ASa?	

TABLE II

SACRAMENTO PEAK PROMINENCE FILMS

Date	PA	Class	Comments
1956			
Jan. 12	52°	ASa, BSs, AS1, B3p, s	Surges flare, loops evolve
Feb. 10	53	ANd, ASa, BSs, ANd*	Huge dome-shaped surges flare (dramatic)
11 12 25	52 52 73	ANd*, ASa, 1 ANd*, AS1, a ANa, BSs	
Mar. 11 21	37 105 268	ANd*, ASf, a ANd ASa, 1, ANc*, m	Streamers
24	283 280	AS1, BSs, ANm ANd*, ASf, 1, BSs, ANd	Mound evolves into hedgerow Loop-shaped streamers from funnel which ascends slowly
25 27	292 105	ANd, ASI, ANm* ANa, d	Hedgerow ascends, then de-
	260	ANd*, BSs*s, ASa	scends in streamers Dome-shaped surges flare Horizontal surges
Apr. 1	281	BSs, ANe, d	Cloud sends streamers to hedgerow
5 7 8	35 90 90	ANd, ASa, BSs BSs, ASa, ANd AS1, a, BSs's, ANcs	Flare in small dome-shaped
10	30	ANd*, AS1, a, BSs	surge Flares in surges; one surge moves slowly in horizontal
11	26	ASf, BSs*s, ASa, ANd≎	direction Spectacular funnel; flare in dome-shaped surge with horizon- tal motion followed by cjcttion of material to great heights from both sides of the dome.
14 16	270 58	ANd*, ASa, BSs's, ANd* ANd	Streamers form an arch
21	270	ANe*, ASf, ANd*, ASa, BSs	The suspended cloud ascends, then sends down loop-shaped streamers. The funnel evolves into a tree. Flare occurs in large dome-shaped surge which arises from one side of hedgerow while loop-shaped streamers emerge from opposite side.

Date		PA	Class	Comments
1956				
Apr.	22 23	2720 213	ASa, ANd ANC, ASa, ANd, AS1, a, B	38
May	1 2 3	35 221 19	AS1, BSs's ANc, ANm, BSs's, AS1 ANm, BSs, ANm	Surge shaped like the head of an animal
	5	280	ANd*, BSs, ANc*	Tree ascends, then descends in streamers
	8	89	ASa, 1, BSs	Flare in surge which evolves into loops
	14 22 28	85 118 42 100	And*, Asa, Bss's And*, Bss? Anm, And, Asa And, Bss	invo loops
	30 31	235 225	ANm, BSs's, ANd ANd#, BSs's, ASa	Flares in surges
June	2	35 125	ANd, ANd, BSs, ANc, BSs ANc, ANd	Tree ascends, then descends in streamers
	12 13 15 22 30	45 110 300 290 125	BSs's ANd*, ASa, BSs ANc*, BSs, ANm ANd, ASa, BSs, ANd AS1, ANd*, ANc	Flare in surge
July	10	229	ANm, BSs, ANd	Arch
Aug.	12 28 30	290 87 83	BSs, ASa, ANd*, BSs ANe, ANc ANd	Loop-shaped streamers
Sept	18 19	24 7 264 264	ANd, ANd», ASf, f, ANd ASf, f, ASa, 1, BSs's ASf, ANd«, ASa, BSs, ANd«	Streamers arching from hedgen row to hedgerow
	24 25 26 28 29	101 60 7 5 84 85	BSs's, ASf ANd, BSs ANd, ANd*, ASa, ANc ANd, BSs, ANc BSs, AS1, a, ANd	Active hedgerow Tree becomes tree trunk
Oct.	5 8	263 260 80	ANd*, ASa, ANC* ANd*, BSs, ANC*, ASI ANC, ANC	Streamers from tree to tree
		87	ANd, BSs	form a large arch Hedgerow forms from separate
	15	273	ANm#, ASa, BSs, AS1	trees
Nov.	<u>4</u>	130 264	ANd*, AS1, f, a, BSs ANd, ASa, BSs's	Small flare in a dome-shaped surge

Date	PA	Class	Comments		
1956					
Nov. 14 2	290 °	ANd	Active hedgerow		
	110 130	BSs, ASl, ANC ASl, ASa, BSs, ANd ANC#, ASa, BSs, p, ANm			
15 6	201	dSs, ASa, ANd;, ANe	Flare in surge		

COMPARISON OF CLASSES FROM SURVEYS AND FILMS

When we compared the classifications made on the films with those made on the surveys we discovered that on two of the 58 days that motion picture studies were made, no stills were made at a corresponding position angle. In the comparable pictures we classified a total of 219 prominences. Of these, 184 were found on both the films and the surveys.

In Table III we show the classifications given to the prominences in both media. Of the prominences seen in both, 127 or 69 per cent were classified indentically; 43 or 23 per cent were typed as belonging to closely related groups; and 14 or 8 per cent otherwise.

TABLE III COMPARISON OF CLASSIFICATIONS FROM FILMS AND SURVEYS PROMINENCE TYPES SEEN IN SACRAMENTO PEAK FILMS, 1956

															Unclassed	Missing	
IN SACRAMENTO PEAK SURVEYS, 1956			ASI	ASF	ASA	BSs	BSp	ANa	AND	ANC	ANd	ANe	ANm	BNS	Unc	Mis	
ĽS,		ASl	7	1	3	1				2						2	
RVES		AS f		5						2	1						
Su		ASa	7		20											2	
PEAK		BSs	1			32											
ر ا		BSp				ı											
MENT		ANa			1			1									
ACRA		ANb								1							
Z ×		ANc		1						3							
H		ANd		2						8	54		6			2	
SEEN		ANe		1						11		1					
TYPES		ANm								1	2		4				
ĭ		BNs				3										1	
SNCE	Unc	lass	ed			1											
PROMINENCE	Mis	sing	3	1	9	11	2						2				

ANALYSIS

In Table IV we give the average number of prominence units per day for the various prominence classes and for each 10° of solar latitude.

In Table V we list the average number of prominence units at all latitudes for types A and B, S and N, those unclassed, and for all types together, for each third of the year. The total areas incressed throughout the year and the total for 1956 is considerably greater than for 1955.

For 1956 we were unable to type 0.3 per cent of the prominences; to 92 per cent we assigned A classifications, denoting that the material was moving downward toward the chromosphere; and to 16 per cent we gave S classifications, indicating their association with sunspots.

In Table I we indicated the N type prominences which were interacting with S types by adding an asterisk to the classification. During 1956, 20 per cent of the treetrunks(ANb), 23 per cent of the tree (ANc), 21 per cent of the hedgerows (ANd), 17 per cent of the suspended clouds (ANe), and 2 per cent of the mounds (ANm), showed this activity.

TABLE IVa

AVERAGE NUMBER OF PROMINENCE UNITS PER DAY

				Northe	rn Lati	tudes			All N.
Class	90-80	79-70	69-60	59-50	49-40	39-30	29-20	19-10	9-0 Latitudes
1956		J	anuary	- April	60 da	ys obse	rvation	18	
AS1 AS1 ASa BSs				2.8 46.6 1.1 4.1	1.1	1.3 4.8 9.1 7.6	22.0 14.8 34.3 26.9	7.6 7.9 25.5 17.4	1.2 34.9 1.0 75.1 1.8 72.9 7.3 70.1
BSP ANA AND ANC AND ANO	0.7 0.3	0.3 0.5 12.2	2.1 1.7 60.8	1.8 4.2 3.9 162.2 1.1	14.2 24.5 168.0	1.2 0.4 12.7 232.2	2.2 2.1 0.2 111.8 16.0	6.9 10.7 176.0 0.2	1.8 9.8 2.2 30.6 11.2 65.4 137.5 1060.7 8.4 25.7
ANm BNs Unclass		0.8 9.5	8.4 4.7	23.7 1.7	1.7 1.8 0.2 218.3	1.1 1.9 272.3	0.2 3.1 1.3 234.9	2.6 1.4 1.6 257.8	0.3 38.8 1.6 29.9 1.1 4.2 175.4 1538.1
All	5.2	23.3	77. 7 1ay - A	253.2 umust (e obser		27110	11714 -7.00-
AS1		•	ag - n	0.6	1.2	6.0	15.1	7.5	2.9 33.3
AST ASa BSs BSp				1.6 3.0	4.8 6.8 6.8	10.5 15.2 9.6 0.4	9.9 21.1 23.3	3.6 17.8 10.7	7.0 37.4 6.2 61.1 3.1 56.5 0.4
ane And Anc And	0.7	1.4	0.2 2.7 7.1 129.6	3.5 3.3 5.2 187.0	1.9 0.4 14.8 156.9	2.0 0.6 7.7 197.5	4.3 2.2 10.3 166.6	5.7 3.4 15.3 97.8	2.3 20.6 5.9 18.5 14.1 74.5 157.9 1094.7
ANe ANm BNs Unclas: All	0.6 16.0 sed 17.3	2.9 12.8 0.2 17.3	23.7 4.5 167.8	2.6 15.2 2.3	2.3 8.7 3.8	4.4 1.8 2.0 0.5 258,2	0.4 1.2 2.9 1.6 258.9	3.9 1.0 2.1 0.2 169.0	0.8 14.4 3.6 58.7 4.6 51.0 1.9 4.4 210.3 1525.5
		:	Septemb	er - De	cember	59 d ays	obser	vations	
AS1 ASC ASA BSS BSP			3.6	0.8 ^.2	0.7 3.0 4.7 1.1	3.0 5.1 14.7 7.9	13.3 24.5 32.4 26.5	10.6 3.1 21.5 18.1	9.9 37.5 13.2 52.5 16.0 90.1 5.5 59.3 0.8 0.8 1.7 7.6 66.4
ANa AND ANC ANd ANe	4.8 1.3 3.6	0.6 53.8	1.6 192.0	0.3 19.3 15.0 167.0	14.1 154.8 3.1	4.8 158.2	0.8 33.6 8.6 61.6 11.9	1.1 6.6 103.6 2.0	11.1 63.1 144.7 1039.3
ANm BNs Unclass	8.7	2.5 13.3	21.2 8.1	13.8 5.4	1.5	3.4 2.9	0.8 3.3	4.7 3.4 0.6	17.0 3.4 51.3 1.7 49.2 0.3 0.9
All	18.4	70.2	226.5	221.8	185.4	200.0	217.3	175.3	214.2 1529.1

TABLE IVb

AVERAGE NUMBER OF PROMINENCE UNITS PER DAY

Southern Latitudes All S.											
Class	1.10	11-2	0 21-3	0 31-4	10 41-5	0 51-60	61-70	71-80		atitudes	
1956 January - April 60 days observation											
AS1	3.4	16.3	•	,						19.7	
ASI ASa	3.4 3.6	2.5	7.2 18.4	5.8	2 (19.1	
BSs	1.0 7.3	21.0 26.3	10.8	0.8 5.8	3.6 7.0	3.7				60°3 गो ¹ °8	
BSp ANa	4.2	7.8	0.8	0.7	0.3			0.7		0.7 13.8	
AND ANC	9,2	3,9 6,5,2	9.3	3.6	8.3	6.8	0.4 1.8			0.4 42.9	
ANd ANe	98.2 3.8	65.∕2 4.∙7	9.3 58.0 0.6	3.6 127.8	120.4 2.7	59.6		20.7		549.9 11.8	
ANm BNs	0.8 1.2	1.3 2.7	4.3 1.3	3.3 3.2	18,8 1.5	8.5 2.8	0.6 7.2	6.8	0.5	38.1	
Unclasse	ed 1.0	1.2	3.6	0.8	_	0.3	-		3.1	29.8 6.9 838.8	
WIT	133.7	152.9	114.3	151.8	162.6	81.7	10.0	28.2	3.6	838.8	
May - August 97 days observations											
asi As f	2.3 18.8	15.6 6.0	11.7 11.4	4.2	1.3 1.1	0.6				35.1 37.9	
ASa BSs	0.9 10.6	38.5 17.2	26.3 25.2	3.5 6.2	0.3 7.6					69.5	
BSp ANa		0.6		0.2						66,8 0.6	
AND	3.4	3.9	1.0		0.9			0.4 0.2	0.2	9.6 0.7	
ANC ANd	18.6 136.3	6.2 78.5	7.4 113.4	5.6 171.6	15.2 272.0	0.5 131 . 5	1.3 16.5	0.7	0.5	56.0 919.8	
ANe ANm	0,7	11.3	1.0	7.1 2.5	3.1 7.0	1.7 16.9	5.0	0.2		24.2 40.5	
BNs Unclasse	4.5	2.6	3.8 0.7	2.9	2.2	2.6	9.3	12.2	8.1	48.2	
All	199.1	183.6	208.0	203.9	311.0	0.3 154.1	32.1	13.7	8.8	5.4 1314.3	
September - December 59 days observations											
AS1	2.4	14,3	22.0	4.8	2.0					45.5	
as f Asa	2.1 15.6 15.3	39.1 24.9	17.8 51.4	3.7 21.9	2.7 1.4					45.5 65.4 115.2 85.9	
BSs BSp	15.3	24,9 18.1	36.1	10.5	1.4 5.9					85.9	
ANa ANb	1.4	0.8	4 A	6.8	2.7		2.0	1.0	•	12.7	
ANC	17.3	2,5 10.8 136.8	6.8 15.7 135.8	8.8 18.8	9.8	11.1	2.0 3.8	0.8		20.1 88.1	
ANd ANe	255.5 4.8	1.2		81.3 5.1	206.0 17.7	182.2	35 .3			88.1 1032.9 28.8	
ANC AND AND AND BNS Unclasse All	3.6 0.6	0,4	6, 3 2 5	81.3 5.1 5.9 2.9 0.3 170.8	2.3	33.6 2,2	11.1	4.2 14.6	2 8	67.4	
Unclasse All	d 0.3 318.9	252.2	294.4	5°3	252.0	229.1		14.6 20.6	2.8	67.4 35.7 2.0 1599.7	
	J, /	V E	/ -+ 0.4+	11000	ں ہےرے	EE 70 A	70.7	~U . O	2.8	ナンソソ・(

TABLE V
SUMMARY FOR 1956

AVERAGE NUMBER OF PROMINENCE UNITS PER DAY AT ALL LATITUDES

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Type	Jan Apr.	May - Aug.	Sept Dec.		
A	2154.4	2606.5	2895.0		
В	191.4	223.5	230.9		
s	398.2	398.6	552.2		
N	1947.6	2431.4	2573.7		
Unclassed	11.1	9.8	2.9		
All	2356.9	2839.8	3128.8		